

**UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION IX**

IN THE MATTER OF:

North Hollywood Operable Unit,
San Fernando Valley (Area 1)
Superfund Site
Los Angeles, California

Honeywell International Inc.

Respondent

ADMINISTRATIVE SETTLEMENT
AGREEMENT AND ORDER ON
CONSENT FOR REMEDIAL DESIGN
FOR WELL NHE-2 TREATMENT AND
DISPOSAL

U.S. EPA Region IX
CERCLA Docket No. 2012-04

Proceeding under Sections 104, 106, 107,
and 122 of the Comprehensive
Environmental Response, Compensation,
and Liability Act of 1980, as amended, 42
U.S.C. §§ 9604, 9606, 9607, and 9622.

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I. JURISDICTION AND GENERAL PROVISIONS

1. This Administrative Settlement Agreement and Order on Consent ("Settlement Agreement") is entered into voluntarily by the United States Environmental Protection Agency ("EPA") and Honeywell International Inc. ("Respondent"). This Settlement Agreement provides that Respondent shall undertake remedial design ("RD") activities, including various procedures and technical analyses, to produce a detailed set of plans and specifications for implementation of an alternative to the approach for treatment and disposal of water extracted by well NHE-2 ("Alternate NHE-2 Treatment and Disposal Approach") selected in EPA's September 30, 2009 Record of Decision for the North Hollywood Operable Unit ("NHOU" or "Site") of the San Fernando Valley (Area 1) Superfund Site (the "Second Interim ROD"), which selected a new interim remedy for the NHOU ("Second Interim Remedy").¹ This Settlement Agreement also provides that Respondent shall reimburse the United States for certain response costs that it incurs, as provided herein.
2. Respondent began developing a long-term approach to treatment and disposal of water from NHOU well NHE-2 pursuant to Cleanup and Abatement Order R4-2003-0037 and its amendments ("CAO") issued by the Regional Water Quality Control Board, Los Angeles Region ("RWQCB") (the "Long-Term CAO Treatment Approach"). Upon the Effective Date of this Settlement Agreement, this Settlement Agreement and the Alternate NHE-2 Treatment and Disposal Approach developed pursuant to this Settlement Agreement will supersede the CAO requirements that apply to long-term treatment and disposal of water at well NHE-2. Prior approvals of or assurances to Respondent regarding any portion of the Long-Term CAO Treatment Approach from the RWQCB are not binding on EPA. This Settlement Agreement shall not affect Respondent's obligations to comply with provisions of the CAO that address matters other than the long-term approach to treatment and disposal of water extracted from well NHE-2, including water replacement and groundwater extraction and containment. In addition, Respondent shall continue to implement the NHE-2 Short-Term Treatment Plan (described in Paragraph 26 below) until notified by EPA and the RWQCB.
3. The RWQCB has reviewed this Settlement Agreement and agrees that upon the Effective Date of this Settlement Agreement, this Settlement Agreement and the Alternate NHE-2 Treatment and Disposal Approach developed pursuant to this

¹Irrespective of the final treatment and disposal approach selected for well NHE-2, the Administrative Settlement Agreement and Order on Consent, U.S. EPA Region IX CERCLA Docket No. 2011-01, reached between EPA, Honeywell International Inc., and Lockheed Martin Corporation ("RD AOC") and Section 1.3.2 of Appendix A (the Statement of Work) to the RD AOC require Honeywell and Lockheed to design well NHE-2 in order to achieve (along with the rest of the NHOU extractions well network) the hydraulic containment of the groundwater plume required by the ROD.

Settlement Agreement will supersede the CAO requirements that apply to long-term treatment and disposal of water at well NHE-2.²

4. Effective February 21, 2011, EPA and Respondent and Lockheed Martin Corporation entered into an Administrative Settlement Agreement and Order on Consent for Remedial Design for the Second Interim Remedy at the NHOU ("RD AOC").³ Pursuant to the RD AOC, EPA and Respondent agreed that Respondent would separately submit a design for the Alternate NHE-2 Treatment and Disposal Approach. Because well NHE-2 is an integral part of the Second Interim Remedy, EPA requires that the NHE-2 design be conducted under EPA oversight and pursuant to a settlement agreement with EPA rather than pursuant to the CAO.
5. The NHOU generally comprises approximately 4 square miles of groundwater contaminated with hazardous substances underlying an area of mixed industrial, commercial and residential land use in the community of North Hollywood, and includes any areas to which and from which such hazardous substance groundwater contamination migrates. The NHOU is generally shown on the maps included in Appendix A.
6. This Settlement Agreement is issued under the authority vested in the President of the United States by Sections 104, 106, 107, and 122 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 ("CERCLA"), as amended, 42 U.S.C. §§ 9604, 9606, 9607, and 9622. This authority was delegated to the EPA Administrator by Executive Order 12580 (52 *Fed. Reg.* 2923, Jan. 29, 1987) and further delegated to EPA Regional Administrators by EPA Delegation No. 14-14-C on April 15, 1994, and by EPA Delegation 14-14-D on May 11, 1994. The Regional Administrator of EPA Region IX further re-delegated the authority to the Superfund Branch Chief, now called Assistant Director, by Regional Delegations R9-1290.15 and R9-1290.20 (both dated September 29, 1997).
7. EPA and Respondent recognize that this Settlement Agreement has been negotiated in good faith and that the actions undertaken by Respondent in accordance with this Settlement Agreement do not constitute an admission of any liability. Respondent does not admit, and retains the right to controvert in any subsequent proceedings other than proceedings to implement or enforce this Settlement Agreement, the validity of the findings of fact, conclusions of law, and determinations in Sections IV and V of this Settlement Agreement. Respondent agrees to comply with, and be bound by, the terms of this Settlement Agreement

² The RWQCB's agreement is memorialized in the letter from Samuel Unger to Benny DeHghi dated January 3, 2013, included as Appendix D.

³ For purposes of this Settlement Agreement and to distinguish between this Settlement Agreement and the RD AOC, the former will be referred to as the "Settlement Agreement" or "NHE-2 AOC" and the latter will be referred to as the "RD AOC."

and further agrees that it will not contest the basis or validity of this Settlement Agreement or its terms.

8. The objectives of EPA and Respondent in entering into this Settlement Agreement are to protect public health or welfare or the environment at the Site by the design and implementation of response actions at the Site by Respondent, to reimburse response costs of EPA, and to resolve the claims of EPA against Respondent as provided in this Settlement Agreement.
9. In accordance with the National Oil and Hazardous Substances Pollution Contingency Plan, 40 C.F.R. Part 300, *et seq.*, as amended ("NCP"), and Section 121(f)(1)(F) of CERCLA, 42 U.S.C. § 9621(f)(1)(F), EPA notified the State of California (the "State") on October 6, 2010, of negotiations with potentially responsible parties ("PRPs") regarding the implementation of the remedial design for the Site, and EPA has provided the State with an opportunity to participate in such negotiations and be a party to this Settlement Agreement.
10. In accordance with Section 122(j)(1) of CERCLA, 42 U.S.C. § 9622(j)(1), EPA notified the United States Department of the Interior and the National Oceanic and Atmospheric Administration on February 22 and February 25, 2010, respectively, of negotiations with PRPs regarding the release of hazardous substances that may have resulted in injury to the natural resources under federal trusteeship and encouraged the trustee(s) to participate in negotiations for cleanup of the NHOU.

II. PARTIES BOUND

11. This Settlement Agreement applies to and is binding upon EPA and upon Respondent and its successors, and assigns. Any change in ownership or corporate status of Respondent including, but not limited to, any transfer of assets or real or personal property shall not alter Respondent's responsibilities under this Settlement Agreement. The signatories to this Settlement Agreement certify that they are authorized to execute and legally bind the parties they represent.
12. Respondent is liable for carrying out all activities required by this Settlement Agreement.
13. Respondent shall ensure that its contractors, subcontractors, and representatives receive a copy of this Settlement Agreement and comply with this Settlement Agreement within 14 days after the Effective Date of this Settlement Agreement or after the date of such retention. Respondent shall be responsible for any noncompliance with this Settlement Agreement.

III. DEFINITIONS

14. Unless otherwise expressly provided herein, terms used in this Settlement Agreement that are defined in CERCLA or in regulations promulgated under CERCLA shall have the meaning assigned to them in CERCLA or its

implementing regulations. Whenever terms listed below are used in this Settlement Agreement, in the documents attached to this Settlement Agreement, or incorporated by reference into this Settlement Agreement, the following definitions shall apply:

- a. "Alternate NHE-2 Treatment and Disposal Approach" shall mean the alternative to the approach for treatment and disposal of water extracted from well NHE-2 selected in EPA's Second Interim ROD that is designed by Respondent pursuant to this Settlement Agreement.
- b. "Alternate Remedial Design for NHE-2" or "ARD" shall mean those activities that Respondent shall undertake to develop the final plans and specifications for the treatment and disposal of water extracted by well NHE-2 pursuant to the Alternate Remedial Design Work Plan for NHE-2.
- c. "Alternate Remedial Design Work Plan for NHE-2" or "ARD Work Plan" shall mean the document developed pursuant to Paragraph 44 of this Settlement Agreement and approved by EPA, and any amendments thereto.
- d. "CERCLA" shall mean the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. §§ 9601, *et seq.*
- e. "CAO" shall mean Cleanup and Abatement Order R4-2003-0037 and its amendments issued by the RWQCB to Honeywell International Inc.
- f. "Day" shall mean a calendar day. In computing any period of time under this Settlement Agreement, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next working day.
- g. "Effective Date" shall be the effective date of this Settlement Agreement as provided in Section XXVIII.
- h. "EPA" shall mean the United States Environmental Protection Agency and any successor departments or agencies of the United States.
- i. "Former Bendix Facility" shall mean the former aerospace manufacturing facility located in the NHOU, located at 11600 Sherman Way, North Hollywood, California, where Allied Signal Aerospace Co. and Bendix Aviation, Ltd. conducted operations from 1941 – 1992.
- j. "Future Response Costs" shall mean all costs, including, but not limited to, direct and indirect costs, that the United States incurs in reviewing or developing plans, reports and other items pursuant to this Settlement Agreement, verifying the Work, or otherwise implementing, overseeing, or enforcing this Settlement Agreement, including but not limited to,

payroll costs, contractor costs, travel costs, laboratory costs, Agency for Toxic Substances and Disease Registry (“ATSDR”) costs, and the costs incurred pursuant to Section XI (Site Access and Institutional Controls), Paragraph 52 (Emergency Response), and Paragraph 100 (Work Takeover).

- k. “Institutional controls” shall mean non-engineered instruments, such as administrative and/or legal controls, that help to minimize the potential for human exposure to contamination and/or protect the integrity of a remedy by limiting land and/or resource use. Examples of institutional controls include easements and covenants, zoning restrictions, special building permit requirements, and well-drilling prohibitions.
- l. “Interest” shall mean interest at the rate specified for interest on investments of the EPA Hazardous Substance Superfund established by 26 U.S.C. § 9507, compounded annually on October 1 of each year, in accordance with CERCLA § 107(a), 42 U.S.C. § 9607(a). The applicable rate of interest shall be the rate in effect at the time the interest accrues. The rate of interest is subject to change on October 1 of each year.
- m. “Long-Term CAO Treatment Approach” shall mean the long-term approach to treatment and disposal of water at NHE-2 developed by Respondent pursuant to the CAO.
- n. “NCP” shall mean the National Oil and Hazardous Substances Pollution Contingency Plan promulgated pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, codified at 40 CFR Part 300, and any amendments thereto.
- o. “NHE-2” or “well NHE-2” shall mean well NHE-2 located in the NHOU. Well NHE-2 is located within the Los Angeles Department of Water and Power (“LADWP”) transmission line easement between Dehougne Street and Hart Street in North Hollywood, California.
- p. “Paragraph” shall mean a portion of this Settlement Agreement identified by an Arabic numeral.
- q. “Parties” shall mean EPA and Respondent.
- r. “Performance Standards” shall mean the cleanup standards and other measures of achievement of the objectives of the Remedial Action, including those set forth in Section 2.13.2 (including Table 6) and 2.8 of the ROD and Section 1.3 of Attachment A to the RD AOC.
- s. “Record of Decision” or “ROD” shall mean the EPA Record of Decision relating to the NHOU, and all attachments thereto that the Regional Administrator, EPA Region IX, or his/her delegate, signed on September 30, 2009. The ROD is included as Appendix B.

- t. "Remedial Action" or "RA" shall mean all actions to be taken by Respondent and any other potentially responsible parties to implement the remedy selected by EPA in the September 30, 2009 Interim Action Record of Decision for the North Hollywood Operable Unit of the San Fernando Valley Area 1 Superfund site in accordance with the Remedial Design as approved pursuant to this Settlement Agreement and the RD AOC.
- u. "RCRA" shall mean the Resource Conservation and Recovery Act, also known as the Solid Waste Disposal Act, as amended, 42 U.S.C. §§ 6901, et seq.
- v. "Respondent" shall mean Honeywell International Inc.
- w. "RWQCB" shall mean the Regional Water Quality Control Board, Los Angeles Region.
- x. "Section" shall mean a portion of this Settlement Agreement identified by a Roman numeral and includes one or more paragraphs.
- y. "Settlement Agreement" shall mean this Administrative Settlement Agreement and Order on Consent and all appendices attached hereto. In the event of conflict between this Settlement Agreement and any appendix, this Settlement Agreement shall control.
- z. "Site" or "NHOU" shall mean the North Hollywood Operable Unit of the San Fernando Valley (Area 1) Superfund Site, which is generally comprised of approximately 4 square miles of groundwater contaminated with hazardous substances underlying an area of mixed industrial, commercial and residential land use in the community of North Hollywood, and includes any areas to which and from which such hazardous substance groundwater contamination migrates. The Site is generally shown on the maps included in Appendix A.
- aa. "State" shall mean the state of California.
- bb. "Statement of Work for the Alternate Remedial Design for NHE-2" or "ASOW" shall mean the statement of work for implementation of the ARD, and any modifications made thereto in accordance with this Settlement Agreement, as set forth in Appendix A of this Settlement Agreement. The Statement of Work for the Alternate Remedial Design for NHE-2 is incorporated into this Settlement Agreement and is an enforceable part of this Settlement Agreement.
- cc. "Waste Material" shall mean (1) any "hazardous substance" under Section 101(14) of CERCLA, 42 U.S.C. § 9601(14); (2) any pollutant or contaminant under Section 101(33) of CERCLA, 42 U.S.C. § 9601(33); (3) any "solid waste" under Section 1004(27) of RCRA, 42 U.S.C. § 6903(27); and (4) any "hazardous material" under California Health and

Safety Code Section 25117; or (5) any "hazardous substance" under California Health and Safety Code Section 25316.

- dd. "Work" shall mean all activities Respondent is required to perform under this Settlement Agreement, except those required by Section XIV (Retention of Records).

IV. FINDINGS OF FACT

15. The Site is an area of contaminated groundwater in the San Fernando Valley Basin (the "Basin"), which lies beneath the San Fernando Valley in Los Angeles County, California. Beginning in the 1940s, the San Fernando Valley was developed for both residential and industrial uses, and was home to many large aerospace companies.
16. The Basin is an important source of drinking water for the Los Angeles metropolitan area. LADWP produces groundwater for public distribution from seven well fields near or within the NHOU. Over the past ten years, groundwater from LADWP well fields located in the Basin, including in the NHOU, has contributed approximately fifteen percent of the City of Los Angeles' municipal water supply.
17. Tests conducted in the early 1980s to determine the presence of certain industrial chemicals in the State's drinking water revealed extensive contamination from volatile organic compounds ("VOCs") in the Basin's groundwater. In 1985, groundwater from 27 of the 38 production wells in the NHOU well field exceeded the federal Maximum Contaminant Level ("MCL") for trichloroethylene ("TCE"), and four wells exceeded the MCL for tetrachloroethylene ("PCE").
18. Pursuant to Section 105 of CERCLA, 42 U.S.C. § 9605, EPA placed the Site on the National Priorities List, set forth at 40 CFR Part 300, Appendix B, by publication in the Federal Register on June 10, 1986, 51 Fed. Reg. 21054.
19. On September 23, 1987, EPA signed a Record of Decision for the remediation of VOC-contaminated groundwater in the NHOU ("1987 ROD"). The 1987 ROD called for extraction and treatment of VOC-contaminated groundwater in order to contain the VOC plume and remove contaminant mass. The groundwater extraction and treatment remedy selected in the 1987 ROD began operating in December 1989 and continues to operate today (the "Existing Remedy").
20. Chromium contamination was detected in the Basin for the first time in 1987, but was not addressed by the Existing Remedy because the extent of chromium contamination in the Basin was not well understood at the time the 1987 ROD was signed. EPA began a chromium monitoring program in the early 1990s, and in 1999 EPA began quarterly monitoring for hexavalent chromium (also referred to as chromium VI), the predominant form of chromium in the Basin's groundwater.

21. The Existing Remedy consists of eight groundwater extraction wells (NHE-1 through NHE-8), an air-stripping treatment system to remove VOCs from the extracted groundwater and activated carbon filters to remove VOCs from the air stream. The Existing Remedy was constructed to operate in conjunction with LADWP's North Hollywood municipal water treatment and distribution plant. The groundwater extracted and treated by the Existing Remedy is discharged into an LADWP blending facility where it is combined with water from other sources before entering the LADWP drinking water supply system. Since its startup, LADWP has operated and maintained the Existing Remedy pursuant to a cooperative agreement with EPA.
22. Respondent is a Delaware corporation that is the successor to the former owner and operator of an aerospace manufacturing facility (the "Former Bendix Facility") from which there have been releases of VOCs and chromium that have impacted or threaten to impact groundwater in the NHOU.
23. In February 2003, the RWQCB issued the CAO to Respondent, which required Respondent to assess emerging chemicals and heavy metals (including total and hexavalent chromium) in unsaturated soil and groundwater beneath the Former Bendix Facility.⁴ In response to the CAO, Respondent prepared a combined Soil and Interim Groundwater Remedial Action Plan ("SIGRAP"). The RWQCB approved the SIGRAP in April 2005, and Respondent commenced design of the soil and interim groundwater remediation system ("Soil and Interim Groundwater Remediation System") at the Former Bendix Facility.
24. In July 2006, after a year of heavy rainfall and rising groundwater levels in the Basin, the total chromium concentration detected in water extracted by well NHE-2, located near the Former Bendix Facility and other potential chromium sources, began to increase. In early 2007, the elevated concentrations of chromium in well NHE-2 caused total chromium concentrations in the combined NHOU treatment system effluent to exceed 30 micrograms per liter (60 percent of the state MCL). As a result, the California Department of Public Health advised LADWP to shut down well NHE-2 or divert the water produced by the well to a non-potable use. Shortly thereafter, LADWP shut down well NHE-2, which kept elevated levels of chromium out of LADWP's drinking water supply, but reduced the Existing Remedy's ability to contain the NHOU groundwater plume.
25. In response to the elevated concentrations of hexavalent chromium detected in well NHE-2, the RWQCB amended the CAO on March 19, 2007. The amended CAO required a water replacement plan that could include wellhead treatment.
26. In response to the requirement that Respondent submit a water replacement plan, Respondent submitted and the RWQCB approved in April 2008 a short-term treatment plan for well NHE-2 ("the NHE-2 Short-Term Treatment Plan") that called for installation of a wellhead VOC treatment unit and modification of the

⁴ The RWQCB has historically focused on cleanup of NHOU facilities that are suspected sources of groundwater contamination while EPA has focused on the regional groundwater cleanup.

discharge piping that would divert the chromium-contaminated water (that was treated for VOCs at the wellhead) to the Los Angeles Bureau of Sanitation sewer system rather than to the LADWP drinking water supply. Operation of well NHE-2 pursuant to the NHE-2 Short-Term Treatment Plan allowed well NHE-2 to provide groundwater containment without introducing chromium-contaminated water to LADWP's drinking water supply. The NHE-2 Short-Term Treatment Plan was implemented in September 2008 and continues to operate under a permit obtained from the Los Angeles Bureau of Sanitation. The RWQCB also required Respondent to proceed with the development and submittal of a long-term treatment plan for well NHE-2.

27. On September 30, 2009, EPA signed the Second Interim ROD, which is included as Appendix B, selecting a new interim remedy for the NHOU ("Second Interim Remedy"). The Second Interim Remedy includes construction of new extraction wells, chromium and 1,4 dioxane treatment, expanded VOC treatment, and continued use of the treated water in LADWP's water supply system. The Second Interim ROD selects a two-step treatment process for water extracted by well NHE-2. First, extracted water is treated for chromium and 1-4 dioxane at the wellhead. Second, the chromium and 1-4 dioxane-treated water is combined with effluent from other NHOU extraction wells and conveyed to the Second Interim Remedy's central VOC treatment system.
28. Although EPA selected a treatment remedy for well NHE-2 in the Second Interim ROD, Respondent remained obligated, pursuant to the CAO, to develop a long-term treatment plan for well NHE-2. Respondent submitted a draft of the Long-Term CAO Treatment Approach to the RWQCB on March 2, 2010. The draft Long-Term CAO Treatment Approach calls for water extracted at well NHE-2 to be conveyed to the Former Bendix Facility (rather than the Second Interim Remedy's central VOC treatment system) for on-site treatment followed by on-site reinjection. The Long-Term CAO Treatment Approach is intended to operate until chromium concentrations in the groundwater extracted by well NHE-2, when combined with effluent from the other NHOU extraction wells, meets the Second Interim ROD's performance standards for chromium.
29. Effective February 21, 2011, EPA, Respondent, and Lockheed Martin Corporation ("Lockheed") entered into an Administrative Settlement Agreement and Order on Consent, U.S. EPA Region IX CERCLA Docket No. 2011-01, ("RD AOC") for design of the entire Second Interim Remedy consistent with the Second Interim ROD, including treatment and disposal of water at well NHE-2. Pursuant to the RD AOC, EPA, Respondent, and Lockheed also agreed that Respondent would separately develop and submit a design for the Alternate NHE-2 Treatment and Disposal Approach to EPA for its consideration. If EPA approves the Alternate NHE-2 Treatment and Disposal Approach, it will be integrated into the final design for the Second Interim Remedy.
30. According to the ATSDR, drinking or breathing high levels of TCE may cause nervous system effects, liver and lung damage, abnormal heartbeat, coma, and

possibly death. Drinking small amounts of TCE for long periods may cause liver and kidney damage, impaired immune system function, and impaired fetal development in pregnant women. ATSDR also considers exposure to very high concentrations of PCE to cause dizziness, headaches, sleepiness, confusion, nausea, difficulty in speaking and walking, unconsciousness, and death. The National Institute for Occupational Safety and Health considers PCE a potential carcinogen.

31. The Department of Health and Human Services, the International Agency for Research on Cancer, and the EPA have determined that chromium (VI) compounds are known human carcinogens. In workers, inhalation of chromium (VI) has been shown to cause lung cancer.

V. CONCLUSIONS OF LAW AND DETERMINATIONS

Based on the Findings of Fact set forth above, as well as the Administrative Record supporting this Settlement Agreement, EPA has determined that:

32. The Site is a "facility" as defined in Section 101(9) of CERCLA, 42 U.S.C. § 9601(9).
33. The contamination found at the Site, as identified in the Findings of Fact above, includes "hazardous substances" as defined in Section 101(14) of CERCLA, 42 U.S.C. § 9601(14).
34. Respondent is a "person" as defined in Section 101(21) of CERCLA, 42 U.S.C. § 9601(21).
35. Respondent is a responsible party as defined in Section 107(a) of CERCLA, 42 U.S.C. § 9607(a), and is subject to this Settlement Agreement under Section 106(a) of CERCLA, 42 U.S.C. § 9606(a). Respondent is liable for performance of response action under the Settlement Agreement and for response costs incurred, and to be incurred, at the Site in connection with this Settlement Agreement. Respondent, Honeywell International, is the former "owner" and/or "operator" of facilities from which there has been a release of hazardous substances, as defined by Section 101(20) of CERCLA, 42 U.S.C. § 9601(20), and within the meaning of Section 107(a)(1) of CERCLA, 42 U.S.C. § 9607(a)(1).
36. The conditions described in the Findings of Fact above constitute an actual or threatened "release" of a hazardous substance from a facility as defined by Section 101(22) of CERCLA, 42 U.S.C. § 9601(22).

VI. SETTLEMENT AGREEMENT AND ORDER

37. Based upon the foregoing Findings of Fact, Conclusions of Law, Determinations, and the Administrative Record for this Site, it is hereby Ordered and Agreed that Respondent shall comply with all provisions of this Settlement Agreement,

including, but not limited to, all attachments to this Settlement Agreement and all documents incorporated by reference into this Settlement Agreement.

VII. DESIGNATED PROJECT MANAGER AND COORDINATORS

38. Respondent has retained and EPA has approved MWH Americas Inc. to perform the Work. Respondent shall also notify EPA of the name(s) and qualification(s) of any other contractor(s) or subcontractor(s) retained to perform the Work at least 10 days prior to commencement of such Work. EPA retains the right to disapprove of any or all of the contractors and/or subcontractors retained by Respondent. If EPA disapproves of a selected contractor, Respondent shall retain a different contractor and shall notify EPA of that contractor's name and qualifications within 45 days of EPA's disapproval. With respect to any contractor proposed to be Supervising Contractor, Respondent shall demonstrate that the proposed contractor has a quality system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs," (American National Standard, January 5, 1995), by submitting a copy of the proposed contractor's Quality Management Plan (QMP). The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001) or equivalent documentation as determined by EPA. EPA will issue a notice of disapproval or an authorization to proceed. Any decision not to require submission of the contractor's QMP should be documented in a memorandum from EPA's Project Manager and Regional Quality Assurance personnel to the Site file.
39. Respondent has designated Benny DeHghi as the Project Coordinator who shall be responsible for administration of all actions by Respondent required by this Settlement Agreement. To the greatest extent possible, the Project Coordinator shall be present on-site or readily available during site work. Documents to be submitted to the Respondent shall be sent to Mr. Benny DeHghi, Remediation Manager – Health, Safety, Environment & Remediation, Honeywell International Inc., M/S 23-21-80, 2525 West 190th Street, Torrance, California 90504-6002 [(310) 512-2296; benny.dehghi@honeywell.com]. EPA retains the right to disapprove of the designated Project Coordinator. If EPA disapproves of the designated Project Coordinator, Respondent shall retain a different Project Coordinator and shall notify EPA of that person's name, address, telephone number, and qualifications within 30 days following EPA's disapproval. Receipt by Respondent's Project Coordinator of any notice or communication from EPA relating to this Settlement Agreement shall constitute receipt by Respondent.
40. EPA has designated Kelly Manheimer of the Region IX Site Cleanup Branch as its Project Manager. Except as otherwise provided in this Settlement Agreement, Respondent shall direct all submissions required by this Settlement Agreement to the Project Manager at 75 Hawthorne Street, SFD-7-1, San Francisco, California 94105 [(415) 972-3290; manheimer.kelly@epa.gov].

41. EPA's Project Manager shall have the authority lawfully vested in a Remedial Project Manager ("RPM") and On-Scene Coordinator ("OSC") by the NCP. In addition, EPA's Project Manager shall have the authority, consistent with the NCP, to halt any Work required by this Settlement Agreement and to take any necessary response action when the Project Manager determines that conditions at the Site may present an immediate endangerment to public health, welfare, or the environment. The absence of the EPA Project Manager from the area under study pursuant to this Settlement Agreement shall not be cause for the stoppage or delay of Work.
42. EPA and Respondent shall have the right, subject to Paragraph 39, to change their respective designated Project Coordinator and Project Manager. Respondent shall notify EPA 10 days before such a change is made. The initial notification may be made orally, but shall be promptly followed by a written notice.

VIII. WORK TO BE PERFORMED

43. Respondent shall perform all action necessary to implement the Statement of Work for the Alternate Remedial Design for NHE-2 ("ASOW") included as Appendix C. In the event that completion of any Work required by this Settlement Agreement and the ASOW is dependent on work required by the RD AOC being completed first, the schedule for completion of Work required by this Settlement Agreement and the ASOW shall be adjusted to accommodate the RD AOC schedule. The remedial design activities undertaken pursuant to the RD AOC ("RD AOC Design Activities") must achieve the Remedial Action Objectives ("RAOs") set forth in the Second Interim ROD. Once the operational parameters for well NHE-2 (e.g., well depth, screen interval, and flow rate) are established pursuant to the RD AOC Design Activities, the remedial design activities undertaken pursuant to this Settlement Agreement must be consistent with those parameters.
44. Work Plan and Implementation
 - a. Within 30 days after EPA's approval of the Quality Management Plan, Respondent shall submit to EPA and the State a work plan for the design of the Alternate NHE-2 Treatment and Disposal Approach ("Alternate Remedial Design Work Plan for NHE-2" or "ARD Work Plan"). The ARD Work Plan shall provide for an alternative to the approach for treatment and disposal of water extracted by well NHE-2 selected in the ROD, in accordance with the ASOW and for achievement of the Performance Standards and other requirements set forth in the ROD, this Settlement Agreement, and/or the ASOW. Upon its approval by EPA pursuant to Section IX (EPA Approval of Plans and Other Submissions), the ARD Work Plan shall be incorporated into and enforceable under this Settlement Agreement.

- b. The ARD Work Plan shall include plans and schedules for implementation of all remedial design and pre-design tasks identified in the ASOW, including, but not limited to, plans and schedules for the completion of a: (1) Health and Safety Plan; (2) Sampling and Analysis Plan (if needed); (3) Remedial Design Quality Assurance Project Plan (RD QAPP), in accordance with Section VII (Quality Assurance, Sampling and Data Analysis); (4) preliminary design submission; (5) an intermediate design submission; and (6) a pre-final/final design submission (if required - see Section 2.2 of the ASOW). Respondent shall also propose in the ARD Work Plan whether they plan to implement the design and construction utilizing the design/bid/build or design/build process for EPA's approval (see Section 2.2 of the ASOW).
- c. Upon approval of the ARD Work Plan by EPA pursuant to Section IX, (EPA Approval of Plans and Other Submissions), after a reasonable opportunity for review and comment by the State, and submission of the Health and Safety Plan for all field activities to EPA and the State, Respondent shall implement the ARD Work Plan. Respondent shall submit to EPA and the State all plans, reports, and other deliverables required under the approved ARD Work Plan in accordance with the approved schedule for review. Unless otherwise directed by EPA, Respondent shall not commence further activities at the NHOU related to the Alternate Remedial Design for NHE-2 prior to approval of the ARD Work Plan.
- d. The preliminary design submission shall include, at a minimum, the following: (1) design criteria; (2) results of additional field sampling and pre-design work; (3) project delivery strategy; (4) preliminary plans, drawings and sketches; (5) required specifications in outline form; and (6) preliminary construction schedule.
- e. The intermediate design submission shall be a continuation and expansion of the preliminary design.
- f. The pre-final/final design submission shall include, at a minimum, the following: (1) final plans and specifications (if the Design/Bid/Build process is approved; not required for the Design/Build process); (2) Construction Quality Assurance Project Plan ("CQAPP"); (3) Field Sampling Plan (directed at measuring progress towards meeting Performance Standards); and (4) Contingency Plan as specified in the ASOW. The CQAPP, which shall detail the approach to quality assurance during construction activities at well NHE-2, shall specify a quality assurance official, independent of the Supervising Contractor or Project Coordinator, to conduct a quality assurance program during the construction phase of the project.

- g. Health and Safety Plan. As approved in the Alternate Remedial Design Work Plan for NHE-2, Respondent shall prepare and submit to EPA for review and comment a plan that ensures the protection of the public health and safety during performance of on-Site work under this Order. This plan shall be prepared in accordance with EPA's Standard Operating Safety Guide (PUB 9285.1-03, PB 92-963414, June 1992). In addition, the plan shall comply with all currently applicable Occupational Safety and Health Administration ("OSHA") regulations found at 29 C.F.R. Part 1910. If EPA determines that it is appropriate, the plan shall also include contingency planning. Respondent shall incorporate all changes to the plan recommended by EPA and shall implement the plan during the pendency of the removal action.
45. Respondent shall conduct all Work in accordance with the ASOW, the ROD, CERCLA, the NCP, and all applicable EPA guidance. EPA's Project Manager shall use his or her best efforts to inform Respondent if new or revised guidances may apply to the Work.
46. Respondent shall perform the tasks and submit the deliverables that the ASOW sets forth. EPA will approve, approve with conditions, modify, or disapprove each deliverable that Respondent submits under this Settlement Agreement and the ASOW, pursuant to Section IX (EPA Approval of Plans and Other Submissions). Each deliverable must include all listed items as well as items that the ARD Work Plan indicates Respondent shall prepare and submit to EPA for review and approval.
47. Upon EPA's approval, this Settlement Agreement incorporates any reports, plans, specifications, schedules, and attachments that this Settlement Agreement or the ASOW requires. With the exception of extensions that EPA allows in writing or certain provisions within Section XVII of this Settlement Agreement (*Force Majeure*), any non-compliance with such EPA-approved reports, plans, specifications, schedules, and attachments shall be considered a violation of this Settlement Agreement and will subject Respondent to stipulated penalties in accordance with Section XVIII of this Settlement Agreement (Stipulated Penalties).
48. If any unanticipated or changed circumstances exist at the NHOU that may significantly affect the Work or schedule, Respondent shall notify the EPA Project Manager by telephone and email within 72 hours of discovery of such circumstances. Such notification is in addition to any notification required by Section XVII (*Force Majeure*).
49. If EPA determines that additional tasks, including, but not limited to, additional investigatory work or engineering evaluation, are necessary to complete the Work, EPA shall notify Respondent in writing. Respondent shall submit a work plan to EPA for the completion of such additional tasks within 30 days of receipt of such notice, or such longer time as EPA agrees. The work plan shall be

completed in accordance with the same standards, specifications, and requirements of other deliverables pursuant to this Settlement Agreement. EPA will review and comment on, as well as approve, approve with conditions, modify, or disapprove the work plan pursuant to Section IX (EPA Approval of Plans and Other Submissions). Upon approval or approval with modifications of the work plan, Respondent shall implement the additional work in accordance with the schedule of the approved work plan. Failure to comply with this Subsection, including, but not limited to, failure to submit a satisfactory work plan, shall subject Respondent to stipulated penalties as set forth in Section XVIII (Stipulated Penalties).

50. Quality Assurance and Sampling

Respondent shall use quality assurance, quality control, and chain of custody procedures for all design, compliance, and monitoring samples in accordance with "EPA Requirements for Quality Assurance Project Plans (QA/R5)" (EPA/240/B-01/003, March 2001, reissued May 2006), "Guidance for Quality Assurance Project Plans (QA/G-5)" (EPA/240/R-02/009, December 2002), and subsequent amendments to such guidelines upon notification by EPA to Respondent of such amendment. Amended guidelines shall apply only to procedures conducted after such notification. Respondent shall only use laboratories that have a documented Quality System that complies with ANSI/ASQC E-4 1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995), and "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001), or equivalent documentation as determined by EPA. Upon request by EPA, Respondent shall have such a laboratory analyze samples submitted by EPA for QA monitoring. Respondent shall provide to EPA the QA/QC procedures followed by all sampling teams and laboratories performing data collection and/or analysis.

- a. Upon request, Respondent shall allow EPA or its authorized representatives to take split or duplicate samples. Respondent shall notify EPA not less than 28 days in advance of any sample collection activity unless shorter notice is agreed to by EPA. In addition, EPA shall have the right to take any additional samples that EPA deems necessary. Upon request, EPA shall allow Respondent to take split or duplicate samples of any samples it takes as part of EPA's oversight of Respondent's implementation of the Work.
- b. Respondent shall, as specified in Attachment 2 to the ASOW, summarize and submit to EPA copies of the results of all sampling and/or tests or other data obtained or generated by or on behalf of Respondent with respect to the NHOU and/or the implementation of this Settlement Agreement unless EPA agrees otherwise.
- c. Respondent shall report all communications that it has with local, state, or other federal authorities related to the ARD Work in the monthly progress reports.

- d. If, at any time during the ARD process, Respondent becomes aware of the need for additional data beyond the scope of the approved Work Plans, Respondent shall have an affirmative obligation to submit to EPA's Project Manager, within 30 days, a memorandum documenting the need for additional data.
 - e. Notwithstanding any provision of this Settlement Agreement, the United States retains all of its information gathering and inspection authorities and rights, including enforcement actions related thereto, under CERCLA, RCRA, and any other applicable statutes or regulations.
51. EPA may prepare a community relations plan, in accordance with EPA guidance and the NCP. As requested by EPA, Respondent shall provide information supporting EPA's community relations plan and shall participate in the preparation of such information for dissemination to the public and in public meetings that may be held or sponsored by EPA to explain activities at, or concerning, the Site, as further described in the ASOW.
52. Emergency Response and Notification of Releases
- a. If any action or occurrence during the performance of the Work causes or threatens a release of Waste Material at the NHOU that constitutes an emergency situation or may present an immediate threat to public health or welfare or the environment, Respondent shall immediately take all appropriate action to prevent, abate, or minimize such release or threat of release, and shall immediately notify the EPA's Project Manager, or, if the Project Manager is unavailable, EPA's Alternate Project Manager. If neither of these persons is available, Respondent shall notify the Duty Officer in EPA Region IX's Emergency Response, Preparedness, and Prevention Branch, at (800) 300-2193. Respondent shall take such actions in consultation with EPA's Project Manager or other available authorized EPA officer and in accordance with all applicable provisions of the Health and Safety Plans, the Contingency Plans, and any other applicable plans or documents developed pursuant to the ASOW. In the event that Respondent fails to take appropriate response action as required by this Section, and EPA takes such action instead, Respondent shall reimburse EPA all costs of the response action not inconsistent with the NCP under Section XV (Payment of Response Costs).
 - b. In addition, in the event of any release of a hazardous substance from the Site, Respondent shall immediately notify the National Response Center at (800) 424-8802. Respondent shall submit a written report to EPA within 7 days after each release, setting forth the events that occurred and the measures taken, or to be taken, to mitigate any release or endangerment caused or threatened by the release and to prevent the reoccurrence of such a release. This reporting requirement is in addition to, and not in lieu of, reporting under Section 103(c) of CERCLA, 42 U.S.C. § 9603(c), and

IX. EPA APPROVAL OF PLANS AND OTHER SUBMISSIONS

53. After review of any plan, report, or other item that is required to be submitted for approval pursuant to this Settlement Agreement, in a notice to Respondent, EPA shall: (a) approve, in whole or in part, the submission; (b) approve the submission upon specified conditions; (c) modify the submission to cure the deficiencies; (d) disapprove, in whole or in part, the submission, directing that Respondent modify the submission; or (e) any combination of the above. Where deemed appropriate by EPA in its sole discretion, the RWQCB will be given a reasonable opportunity to review and comment. However, EPA shall not modify a submission without first providing Respondent at least one notice of deficiency and an opportunity to cure within 15 days, except where to do so would cause serious disruption to the Work or where previous submission(s) have been disapproved due to material defects.
54. In the event of approval, approval upon conditions, or modification by EPA, pursuant to Subparagraph 53(a), (b), (c), or (e), Respondent shall proceed to take any action required by the plan, report, or other deliverable, as approved or modified by EPA subject only to its right to invoke the Dispute Resolution procedures set forth in Section XVI (Dispute Resolution) with respect to the modifications or conditions made by EPA. Following EPA approval or modification of a submission or portion thereof, Respondent shall not thereafter alter or amend such submission or portion thereof unless directed by EPA. In the event that EPA modifies the submission to cure the deficiencies pursuant to Subparagraph 53(c) and the submission had a material defect, EPA retains the right to seek stipulated penalties, as provided in Section XVIII (Stipulated Penalties).
55. Resubmission
- a. Upon receipt of a notice of disapproval, Respondent shall, within 15 days or such longer time as specified by EPA in such notice, correct the deficiencies and resubmit the plan, report, or other deliverable for approval. Any stipulated penalties applicable to the submission, as provided in Section XVIII, shall accrue during the 15-day period or otherwise specified period but shall not be payable unless the resubmission is disapproved or modified due to a material defect as provided in Paragraphs 56 and 57.
- b. Notwithstanding the receipt of a notice of disapproval, Respondent shall proceed to take any action required by any non-deficient portion of the submission, unless otherwise directed by EPA. Implementation of any non-deficient portion of a submission shall not relieve Respondent of any

liability for stipulated penalties under Section XVIII (Stipulated Penalties).

- c. Respondent shall not proceed further with any subsequent activities or tasks until receiving EPA approval, approval on condition, or modification of the ARD Work Plan, the Preliminary Design, the Intermediate Design, the Prefinal Design, the Groundwater Monitoring Plan, and the Sampling and Analysis Plan. While awaiting EPA approval, approval on condition, or modification of this deliverable, Respondent shall proceed with all other tasks and activities that may be conducted independently of this deliverable, in accordance with the schedule set forth under this Settlement Agreement.
 - d. For all remaining deliverables not listed above in Subparagraph 55(c), Respondent shall proceed with all subsequent tasks, activities, and deliverables without awaiting EPA approval on the submitted deliverable. EPA reserves the right to stop Respondent from proceeding further, either temporarily or permanently, on any task, activity, or deliverable at any point.
56. If EPA disapproves a resubmitted plan, report, or other deliverable, or portion thereof, EPA may again direct Respondent to correct the deficiencies. EPA shall also retain the right to modify or develop the plan, report, or other deliverable. Respondent shall implement any such plan, report, or deliverable as corrected, modified, or developed by EPA, subject only to Respondent's right to invoke the procedures set forth in Section XVI (Dispute Resolution).
57. If upon resubmission, a plan, report, or other deliverable is disapproved or modified by EPA due to a material defect, Respondent shall be deemed to have failed to submit such plan, report, or other deliverable timely and adequately, unless Respondent invokes the dispute resolution procedures in accordance with Section XVI (Dispute Resolution) and EPA's action is revoked or substantially modified pursuant to a Dispute Resolution decision issued by EPA or superseded by an agreement reached pursuant to that Section. The provisions of Section XVI (Dispute Resolution) and Section XVIII (Stipulated Penalties) shall govern the implementation of the Work and accrual and payment of any stipulated penalties during Dispute Resolution. If EPA's disapproval or modification is not otherwise revoked, substantially modified, or superseded as a result of a decision or agreement reached pursuant to the Dispute Resolution process set forth in Section XVI, stipulated penalties shall accrue for such violation from the date on which the initial submission was originally required, as provided in Section XVIII.
58. In the event that EPA takes over some of the tasks, Respondent shall incorporate and integrate information supplied by EPA into the final reports.
59. All plans, reports, and other deliverables submitted to EPA under this Settlement Agreement shall, upon approval or modification by EPA, be incorporated into and

enforceable under this Settlement Agreement. In the event EPA approves or modifies a portion of a plan, report, or other deliverable submitted to EPA under this Settlement Agreement, the approved or modified portion shall be incorporated into and become enforceable under this Settlement Agreement.

X. PROGRESS REPORTS

60. Reporting. Respondent shall submit progress reports and copies of all plans, reports, data, and other deliverables required by this Settlement Agreement as specified in Section 2.3 of the ASOW and Attachment 2 of the ASOW.
61. Final Report. Within 45 days after completion of all Work required by this Settlement Agreement, Respondent shall submit for EPA review and approval a final report summarizing the actions taken to comply with this Settlement Agreement. The final report shall conform, at a minimum, with the requirements set forth in Section 300.165 of the NCP entitled "OSC Reports." The final report shall include the following certification signed by a person(s) who supervised or directed the preparation of that report:

To the best of my knowledge, after thorough investigation, I certify that the information contained in, or accompanying, this submission is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

XI. SITE ACCESS AND INSTITUTIONAL CONTROLS

62. If Respondent owns or controls property within the boundaries of the Site, or any other property where access is needed to implement this Settlement Agreement, or where land/water use controls are necessary to implement this Settlement Agreement, Respondent shall, commencing on the Effective Date, provide EPA, the State, and its/their representatives, including contractors, with access at all reasonable times to such property in order to conduct any activity related to this Settlement Agreement. Commencing on the Effective Date, Respondent shall not use real property that it owns or controls, in any manner that EPA determines will pose an unacceptable risk to human health or to the environment due to exposure to Waste Materials or interfere with or adversely affect the implementation, integrity, or protectiveness of the Remedial Action. If required by the Work, the land/water use restrictions shall include, but not be limited to: installation of drinking water wells. If Respondent owns or controls property within the boundaries of the Site, it shall, at least 30 days prior to the conveyance of any interest in real property within the boundaries of the Site, give written notice to the transferee that the property is subject to this Settlement Agreement and written notice to EPA and the State of the proposed conveyance, including the name and address of the transferee. If Respondent owns or controls property within the boundaries of the Site, it also agrees to require that its successors comply with the

immediately preceding sentence, this Section, and Section XII (Access to Information). The activities related to this Settlement Agreement include, but are not limited to:

1. Monitoring the Work;
 2. Verifying any data or information submitted to the United States;
 3. Conducting investigations regarding contamination at or near the NHOU;
 4. Obtaining samples;
 5. Assessing the need for, planning, or implementing additional response actions at or near the NHOU;
 6. Assessing implementation of quality assurance and quality control practices as defined in the approved Quality Assurance Project Plans;
 7. Implementing the Work pursuant to the conditions set forth in Paragraph 100 (Work Takeover);
 8. Inspecting and copying records, operating logs, contracts, or other documents maintained or generated by Respondent or its agents, consistent with Section XII (Access to Information);
 9. Assessing Respondent's compliance with the Settlement Agreement;
 10. Determining whether the NHOU or other real property is being used in a manner that is prohibited or restricted, or that may need to be prohibited or restricted under the Settlement Agreement; and
 11. Implementing, monitoring, maintaining, reporting on, and enforcing any Institutional Controls.
63. If any real property where access and/or land/water use restrictions are needed, is owned or controlled by persons other than Respondent, Respondent shall use best efforts to secure from such persons:
- a. An agreement to provide access thereto for the United States, the State, and Respondent, and its representatives, contractors and subcontractors, to conduct any activity regarding the Settlement Agreement including, but not limited to, the activities listed in Paragraph 62; and
 - b. An agreement, enforceable by Respondent, the State, and the United States, to refrain from using the real property owned or controlled by such

persons, in any manner that EPA determines will pose an unacceptable risk to human health or to the environment due to exposure to Waste Materials or interfere with or adversely affect the implementation, integrity, or protectiveness of the Remedial Action. The agreement shall include, but not be limited to, the land/water use restrictions listed in Paragraph 62.

64. For purposes of Paragraphs 62 and 63, "best efforts" includes the payment of reasonable sums of money to obtain access, an agreement to restrict land/water use, a proprietary control, and/or an agreement to release or subordinate a prior lien or encumbrance. If, within 45 days of the Effective Date, Respondent has not obtained agreements to provide access or restrict land/water use as required by Paragraph 62 and 63, Respondent shall promptly notify the United States in writing, and shall include in that notification a summary of the steps that Respondent has taken to attempt to comply with Paragraph 62 or 63. The United States may, as it deems appropriate, assist Respondent in obtaining access or agreements to restrict land/water use. Respondent shall reimburse the United States under Section XV (Payments of Response Costs), for all costs incurred, direct or indirect, by the United States in obtaining such access or agreements to restrict land/water use, including, but not limited to, the cost of attorney time and the amount of monetary consideration paid or just compensation.
65. If EPA determines that Institutional Controls in the form of state or local laws, regulations, ordinances, zoning restrictions, or other governmental controls are needed, Respondent shall cooperate with EPA's efforts to secure and ensure compliance with such governmental controls.
66. Notwithstanding any provision of this Settlement Agreement, the United States and the State retain all of their access authorities and rights, as well as all of their rights to require Institutional Controls, including enforcement authorities related thereto, under CERCLA, RCRA, and any other applicable statute or regulations.
67. If Respondent cannot obtain access agreements, EPA may obtain access for Respondent, perform those tasks or activities with EPA contractors, or terminate the Settlement Agreement. If EPA performs those tasks or activities with EPA contractors and does not terminate the Settlement Agreement, Respondent shall perform all other activities not requiring access to that site and shall reimburse EPA for all costs incurred in performing such activities. Respondent shall integrate the results of any such tasks undertaken by EPA into its reports and deliverables.

XII. ACCESS TO INFORMATION

68. Respondent shall provide to EPA and the State, upon request, copies of all documents and information within its possession or control or that of its contractors or agents relating to the implementation of this Settlement Agreement, including, but not limited to, sampling, analysis, chain of custody records,

manifests, trucking logs, receipts, reports, sample traffic routing, correspondence, or other documents or information related to the Work. Respondent shall also make available to EPA and the State, for purposes of investigation, information gathering, or testimony, its employees, agents, or representatives with knowledge of relevant facts concerning the performance of the Work.

69. Respondent may assert business confidentiality claims covering part or all of the documents or information submitted to EPA and the State under this Settlement Agreement to the extent permitted by and in accordance with Section 104(e)(7) of CERCLA, 42 U.S.C. § 9604(e)(7), and 40 C.F.R. § 2.203(b). Documents or information determined to be confidential by EPA will be afforded the protection specified in 40 C.F.R. Part 2, Subpart B. If no claim of confidentiality accompanies documents or information when it is submitted to EPA and the State, or if EPA has notified Respondent that the documents or information are not confidential under the standards of Section 104(e)(7) of CERCLA or 40 C.F.R. Part 2, Subpart B, the public may be given access to such documents or information without further notice to Respondent. Respondent shall segregate and clearly identify all documents or information submitted under this Settlement Agreement for which Respondent asserts business confidentiality claims.
70. Respondent may assert that certain documents, records, and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If the Respondent asserts such a privilege in lieu of providing documents, it shall provide EPA and the State with the following: a) the title of the document, record, or information; b) the date of the document, record, or information; c) the name and title of the author of the document, record, or information; d) the name and title of each addressee and recipient; e) a description of the contents of the document, record, or information; and f) the privilege asserted by Respondent. However, no documents, reports or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.
71. No claim of confidentiality shall be made with respect to any data, including, but not limited to, all sampling, analytical, monitoring, hydrogeologic, scientific, chemical, or engineering data, or any other documents or information evidencing conditions at, or around, the Site.

XIII. RECORD RETENTION

72. During the pendency of this Settlement Agreement and until 10 years after the Respondent's receipt of EPA's notification that work has been completed, Respondent shall preserve and retain all non-identical copies of documents, records, and other information (including documents, records, or other information in electronic form) now in its possession or control or which come into its possession or control that relate in any manner to the performance of the Work or the liability of any person under CERCLA with respect to the Site, regardless of any corporate retention policy to the contrary. Until 10 years after

notification that work has been completed, Respondent shall also instruct its contractors and agents to preserve all documents, records, and other information of whatever kind, nature, or description relating to performance of the Work.

73. At the conclusion of this document retention period, Respondent shall notify EPA and the State at least 90 days prior to the destruction of any such documents, records, or other information and, upon request by EPA or the State, Respondent shall deliver any such documents, records, or other information to EPA or the State. Respondent may assert that certain documents, records, and other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Respondent asserts such a privilege, it shall provide EPA with the following: (a) the title of the document, record, or other information; (b) the date of the document, record, or other information; (c) the name and title of the author of the document, record, or other information; (d) the name and title of each addressee and recipient; (e) a description of the subject of the document, record, or other information; and (f) the privilege asserted by Respondent. However, no documents, records, or other information created or generated pursuant to the requirements of this Settlement Agreement shall be withheld on the grounds that they are privileged.
74. Respondent hereby certifies individually that to the best of its knowledge and belief, after thorough inquiry, it has not altered, mutilated, discarded, destroyed, or otherwise disposed of any records, documents, or other information (other than identical copies) relating to its potential liability regarding the Site since notification of potential liability by EPA or the State or the filing of suit against it regarding the NHO, and that it has fully complied with any and all EPA requests for information pursuant to Sections 104(e) and 122(e) of CERCLA, 42 U.S.C. §§ 9604(e) and 9622(e), and Section 3007 of RCRA, 42 U.S.C. § 6927.

XIV. COMPLIANCE WITH OTHER LAWS

75. Respondent shall undertake all action that this Settlement Agreement requires in accordance with the requirements of all applicable local, state, and federal laws and regulations, unless an exemption from such requirements is specifically provided by law or in this Settlement Agreement. The activities conducted pursuant to this Settlement Agreement, if approved by EPA, shall be considered consistent with the NCP.
76. Except as provided in Section 121(e) of CERCLA, 42 U.S.C. § 9621(e), and the NCP, no permit shall be required for any portion of the Work conducted entirely on-site. Where any portion of the Work requires a federal or state permit or approval, Respondent shall submit timely applications and take all other actions necessary to obtain and to comply with all such permits or approvals.
77. This Settlement Agreement is not, and shall not be construed to be, a permit issued pursuant to any federal or state statute or regulation.

XV. PAYMENT OF RESPONSE COSTS

78. Payment for Future Response Costs

- a. Respondent shall pay EPA all Future Response Costs not inconsistent with the NCP. On a periodic basis, but at least one year after the Effective Date, EPA will send Respondent a bill requiring payment that includes an EPA cost summary, which includes direct and indirect costs incurred by EPA and its contractors. Respondent shall make all payments within 45 days of receipt of each bill requiring payment, except as otherwise provided in Paragraph 80.
- b. Respondent shall make all payments by a certified or cashier's check or checks made payable to "EPA Hazardous Substance Superfund," referencing the name and address of the party/parties making payment, the Site name, the EPA Region and Site/Spill ID Number 09N1, and the EPA docket number for this action. Respondent shall send the check(s) to:

U.S. Environmental Protection Agency
Superfund Payments
Cincinnati Finance Center
PO Box 979076
St. Louis, Missouri 63197-9000

The payment may instead be made by Electronic Funds Transfer ("EFT" or "wire transfer") in accordance with instructions provided to Respondent in the first bill for response costs.

- c. At the time of payment, Respondent shall send notice that payment has been made to Kelly Manheimer at 75 Hawthorne Street SFD-7-1, San Francisco, California 94105. This notice will include copies of the transmittal letter and the check.
- d. The total amount to be paid by Respondent pursuant to Subparagraph 78.a shall be deposited in the NHOU Special Account within the EPA Hazardous Substance Superfund to be retained and used to conduct or finance response actions at or in connection with the Site, or to be transferred by EPA to the EPA Hazardous Substance Superfund.

79. In the event that the payments for Future Response Costs are not made within 45 days of Respondent's receipt of a bill, Respondent shall pay Interest on the unpaid balance. The Interest on Future Response Costs shall begin to accrue on the date of the bill and shall continue to accrue until the date of payment. Payments of Interest made under this Paragraph shall be in addition to such other remedies or sanctions available to the United States by virtue of Respondent's failure to make timely payments under this Section, including but not limited to, payment of stipulated penalties pursuant to Section XVIII.

80. Respondent may contest payment of any Future Response Costs billed under Paragraph 78, if it determines that EPA has made an accounting error, or if it believes EPA incurred excess costs as a direct result of an EPA action that was inconsistent with the NCP. Such objection shall be made in writing within 45 days of receipt of the bill and must be sent to the EPA Project Manager. Any such objection shall specifically identify the contested Future Response Costs and the basis for objection. In the event of an objection, Respondent shall within the 45-day period pay all uncontested Future Response Costs to EPA in the manner described in Paragraph 78. Simultaneously, Respondent shall establish an interest-bearing escrow account in a federally-insured bank duly chartered in the State of California and remit to that escrow account funds equivalent to the amount of the contested Future Response Costs. Respondent shall send to the EPA Project Manager a copy of the transmittal letter and check paying the uncontested Future Response Costs, and a copy of the correspondence that establishes and funds the escrow account, including, but not limited to, information containing the identity of the bank and bank account under which the escrow account is established as well as a bank statement showing the initial balance of the escrow account. Simultaneously with establishment of the escrow account, Respondent shall initiate the Dispute Resolution procedures in Section XVI (Dispute Resolution). If EPA prevails in the dispute, within 15 days of the resolution of the dispute, Respondent shall pay the sums due (with accrued interest) to EPA in the manner described in Paragraph 78. If Respondent prevails concerning any aspect of the contested costs, Respondent shall pay that portion of the costs (plus associated accrued interest) for which it did not prevail to EPA in the manner described in Paragraph 78. Respondent shall be disbursed any balance of the escrow account. The dispute resolution procedures set forth in this Paragraph in conjunction with the procedures set forth in Section XVI (Dispute Resolution) shall be the exclusive mechanisms for resolving disputes regarding Respondent's obligation to reimburse EPA for its Future Response Costs.

XVI. DISPUTE RESOLUTION

81. Unless this Settlement Agreement expressly provides otherwise, the dispute resolution procedures of this Section shall be the exclusive mechanism for resolving disputes arising under this Settlement Agreement. The Parties shall attempt to resolve any disagreements concerning this Settlement Agreement expeditiously and informally.
82. If Respondent objects to any EPA action taken pursuant to this Settlement Agreement, including billings for Future Response Costs, it shall notify EPA in writing of its objection(s) within 20 days of such action, unless the objection(s) has/have been resolved informally. EPA and Respondent shall have 30 days from EPA's receipt of Respondent's written objection(s) to resolve the dispute through formal negotiations (the "Negotiation Period"). The Negotiation Period may be extended at the sole discretion of EPA.

83. Any agreement reached by the Parties pursuant to this Section shall be in writing and shall, upon signature by both Parties, be incorporated into and become an enforceable part of this Settlement Agreement. If the Parties are unable to reach an agreement within the Negotiation Period, an EPA management official at the Division Director level or higher will issue a written decision on the dispute to Respondent. EPA's decision shall be incorporated into and become an enforceable part of this Settlement Agreement. Respondent's obligations under this Settlement Agreement shall not be tolled by submission of any objection for dispute resolution under this Section. Following resolution of the dispute, as provided by this Section, Respondent shall fulfill the requirement that was the subject of the dispute in accordance with the agreement reached or with EPA's decision, whichever occurs. Respondent shall proceed in accordance with EPA's final decision regarding the matter in dispute, regardless of whether Respondent agrees with the decision.

XVII. FORCE MAJEURE

84. Respondent agrees to perform all requirements of this Settlement Agreement within the time limits established under this Settlement Agreement, unless the performance is delayed by a *force majeure*. For purposes of this Settlement Agreement, a *force majeure* is defined as any event arising from causes beyond the control of Respondent, or of any entity controlled by Respondent, including, but not limited to, its contractors and subcontractors, that delays or prevents performance of any obligation under this Settlement Agreement despite Respondent's best efforts to fulfill the obligation. The requirement that Respondent exercise "best efforts to fulfill the obligation" includes using best efforts to anticipate any potential *force majeure* event: (a) as it is occurring; and (b) following the potential *force majeure* event, such that the delay is minimized to the greatest extent possible. *Force majeure* does not include financial inability to complete the Work or increased cost of performance.
85. If any event occurs or has occurred that may delay the performance of any obligation under this Settlement Agreement, whether or not caused by a *force majeure* event, Respondent shall notify EPA by telephone and by email within 72 hours of when Respondent first knew that the event might cause a delay. Within 10 days thereafter, Respondent shall provide to EPA in writing: an explanation and description of the reasons for the delay; the anticipated duration of the delay; all actions taken or to be taken to prevent or minimize the delay; a schedule for implementation of any measures to be taken to prevent or mitigate the delay or the effect of the delay; Respondent's rationale for attributing such delay to a *force majeure* event if it intends to assert such a claim; and a statement as to whether, in the opinion of Respondent, such event may cause or contribute to an endangerment to public health, welfare, or the environment. Failure to comply with the above requirements shall preclude Respondent from asserting any claim of *force majeure* for that event for the period of time of such failure to comply and for any additional delay caused by such failure. Respondent shall be deemed

to know of any circumstance of which Respondent, any entity controlled by Respondent, or Respondent's contractors knew or should have known.

86. If EPA agrees that the delay or anticipated delay is attributable to a *force majeure* event, the time for performance of the obligations under this Settlement Agreement that are affected by the *force majeure* event will be extended by EPA for such time as is necessary to complete those obligations. An extension of the time for performance of the obligations affected by the *force majeure* event shall not, of itself, extend the time for performance of any other obligation. If EPA does not agree that the delay or anticipated delay has been or will be caused by a *force majeure* event, EPA will notify Respondent in writing of its decision. If EPA agrees that the delay is attributable to a *force majeure* event, EPA will notify Respondent in writing of the length of the extension, if any, for performance of the obligations affected by the *force majeure* event.

XVIII. STIPULATED PENALTIES

87. Respondent shall be liable to EPA for stipulated penalties in the amounts set forth in Paragraphs 88 and 89 for failure to comply with the requirements of this Settlement Agreement specified below, unless excused under Section XVII (*Force Majeure*). "Compliance" by Respondent shall include completion of the activities under this Settlement Agreement, the ASOW, or any other plan approved under this Settlement Agreement identified below in accordance with all applicable requirements of law, this Settlement Agreement, the ASOW, and any plans or other documents approved by EPA pursuant to this Settlement Agreement and within the specified time schedules established by, and approved under, this Settlement Agreement.

88. Stipulated Penalty Amounts - Work (Including Payments and Excluding Plans, Reports, and Other Deliverables).

- a. The following stipulated penalties shall accrue per violation per day for any noncompliance identified in Paragraph 88.b:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$2,000	1st through 14th day
\$3,500	15th through 30th day
\$7,000	31st day and beyond

- b. Compliance Milestones.

1. Timely payment of Future Response Costs.
2. Providing or arranging for access as set forth in Section XI (Site Access and Institutional Controls).

3. Submittal of Alternate Remedial Design Work Plan for NHE-2.
4. Submittal of Preliminary Design Report.
5. Submittal of Intermediate Design Report.

89. Stipulated Penalty Amounts - Plans, Reports, and other Deliverables. The following stipulated penalties shall accrue per violation per day for failure to submit timely or adequate reports or other plans or deliverables as otherwise required in this Settlement Agreement and the ASOW:

<u>Penalty Per Violation Per Day</u>	<u>Period of Noncompliance</u>
\$1,000	1st through 14th day
\$2,000	15th through 30th day
\$3,000	31st day and beyond

90. In the event that EPA assumes performance of a portion or all of the Work pursuant to Paragraph 100, Respondent shall be liable for a stipulated penalty in the amount of \$250,000.
91. All penalties shall begin to accrue on the day after the complete performance is due, or the day a violation occurs, and shall continue to accrue through the final day of the correction of the noncompliance or completion of the activity. However, stipulated penalties shall not accrue: (a) with respect to a deficient submission under Section VIII (Work to be Performed), during the period, if any, beginning on the 31st day after EPA's receipt of such submission until the date that EPA notifies Respondent of any deficiency; and (b) with respect to a decision by the EPA Management Official designated under Paragraph 83 of Section XVI (Dispute Resolution), during the period, if any, beginning on the 21st day after the Negotiation Period begins until the date that the EPA management official issues a final decision regarding such dispute. Nothing herein shall prevent the simultaneous accrual of separate penalties for separate violations of this Settlement Agreement.
92. Following EPA's determination that Respondent has failed to comply with a requirement of this Settlement Agreement, EPA may give Respondent written notification of the failure and describe the noncompliance. EPA may send Respondent a written demand for payment of the penalties. However, penalties shall accrue as provided in the preceding Paragraph regardless of whether EPA has notified Respondent of a violation.
93. Respondent shall pay EPA all penalties accruing under this Section within 45 days of Respondent's receipt from EPA of a demand for payment of the penalties, unless Respondent invokes the dispute resolution procedures under Section XVI (Dispute Resolution). All payments to EPA under this Section shall be paid by

certified or cashier's check(s) made payable to "EPA Hazardous Substances Superfund," and shall be mailed to:

U.S. Environmental Protection Agency
Superfund Payments
Cincinnati Finance Center
PO Box 979076
St. Louis, Missouri 63197-9000

Respondent shall indicate that the payment is for stipulated penalties, and shall reference the EPA Region and Site/Spill ID Number 09N1, the EPA Docket Number 2011-01, and the name and address of the party/parties making payment. Copies of checks paid pursuant to this Section, and any accompanying transmittal letters, shall be sent to EPA as provided in Paragraph 40.

The payment may instead be made by Electronic Funds Transfer ("EFT" or "wire transfer") in accordance with instructions provided to Respondent in the first bill for response costs.

94. The payment of penalties shall not alter in any way Respondent's obligation to complete performance of the Work required under this Settlement Agreement.
95. Penalties shall continue to accrue during any dispute resolution period but need not be paid until 15 days after the dispute is resolved by agreement or by receipt of EPA's decision.
96. If Respondent fails to pay stipulated penalties when due, EPA may institute proceedings to collect the penalties, as well as Interest. Respondent shall pay Interest on the unpaid balance, which shall begin to accrue on the date of demand made pursuant to Paragraph 92. Nothing in this Settlement Agreement shall be construed as prohibiting, altering, or in any way limiting the ability of EPA to seek any other remedies or sanctions available by virtue of Respondent's violation of this Settlement Agreement or of the statutes and regulations upon which it is based, including, but not limited to, penalties pursuant to Sections 106(b) and 122(l) of CERCLA, 42 U.S.C. §§ 9606(b) and 9622(l), and punitive damages pursuant to Section 107(c)(3) of CERCLA, 42 U.S.C. § 9607(c)(3). Provided, however, that EPA shall not seek civil penalties pursuant to Section 106(b) or 122(l) of CERCLA or punitive damages pursuant to Section 107(c)(3) of CERCLA for any violation for which a stipulated penalty is provided herein, except in the case of a willful violation of this Settlement Agreement or in the event that EPA assumes performance of a portion or all of the Work pursuant to Section XX (Reservation of Rights by EPA), Paragraph 98. Notwithstanding any other provision of this Section, EPA may, in its unreviewable discretion, waive any portion of stipulated penalties that have accrued pursuant to this Settlement Agreement.

XIX. COVENANT NOT TO SUE BY EPA

97. In consideration of the actions that Respondent will perform and the payments that Respondent will make under the terms of this Settlement Agreement, and except as otherwise specifically provided in this Settlement Agreement, EPA covenants not to sue or to take administrative action against Respondent pursuant to Sections 106 and 107(a) of CERCLA, 42 U.S.C. §§ 9606 and 9607(a), for the Work and Future Response Costs. This covenant not to sue shall take effect upon the Effective Date and is conditioned upon Respondent's complete and satisfactory performance of all obligations under this Settlement Agreement, including, but not limited to, payment of Future Response Costs pursuant to Section XV. This covenant not to sue extends only to Respondent and does not extend to any other person.

XX. RESERVATION OF RIGHTS BY EPA

98. Except as specifically provided in this Settlement Agreement, nothing herein shall limit the power and authority of EPA or the United States to take, direct, or order all actions necessary to protect public health, welfare, or the environment or to prevent, abate, or minimize an actual or threatened release of hazardous substances, pollutants or contaminants, or hazardous or solid waste on, at, or from the Site. Further, except as specifically provided in this Settlement Agreement, nothing herein shall prevent EPA from seeking legal or equitable relief to enforce the terms of this Settlement Agreement, from taking other legal or equitable action as it deems appropriate and necessary, or from requiring Respondent in the future to perform additional activities pursuant to CERCLA or any other applicable law.
99. The covenant not to sue set forth in Section XIX above does not pertain to any matters other than those expressly identified therein. EPA reserves, and this Settlement Agreement is without prejudice to, all rights against Respondent with respect to all other matters, including, but not limited to:
- a. claims based on a failure by Respondent to meet a requirement of this Settlement Agreement;
 - b. liability for costs not included within the definition of Future Response Costs;
 - c. liability for performance of response action other than the Work;
 - d. criminal liability;
 - e. liability for damages for injury to, destruction of, or loss of natural resources, and for the costs of any natural resource damage assessments;
 - f. liability arising from the past, present, or future disposal, release, or threat of release of Waste Materials outside of the Site; and

- g. liability for costs incurred, or to be incurred, by the Agency for Toxic Substances and Disease Registry related to the Site.
100. Work Takeover. In the event EPA determines that Respondent has ceased implementation of any portion of the Work, are seriously or repeatedly deficient or late in its performance of the Work, or is implementing the Work in a manner that may cause an endangerment to human health or the environment, EPA may assume the performance of any or all portion(s) of the Work as EPA determines necessary. Unless EPA determines that the circumstances require more immediate action on its part, EPA shall give Respondent 30 days notice of its intent to assume the performance of any or all portion(s) of the Work under this Paragraph. Respondent may invoke the procedures set forth in Section XVI (Dispute Resolution) to dispute EPA's determination that takeover of the Work is warranted under this Paragraph. Costs that the United States incurs in performing the Work pursuant to this Paragraph shall be considered Future Response Costs that Respondent shall pay pursuant to Section XV (Payment of Response Costs). Notwithstanding any other provision of this Settlement Agreement, EPA retains all authority and reserves all rights to take any and all response actions authorized by law.

XXI. COVENANT NOT TO SUE BY RESPONDENT

101. Respondent covenants not to sue and agrees not to assert any claims or causes of action against the United States, or its contractors or employees, with respect to the Work, past response actions, Future Response Costs, or this Settlement Agreement, including, but not limited to:
- a. any direct or indirect claim for reimbursement from the Hazardous Substance Superfund established by 26 U.S.C. § 9507, based on Sections 106(b)(2), 107, 111, 112, or 113 of CERCLA, 42 U.S.C. §§ 9606(b)(2), 9607, 9611, 9612, or 9613, or any other provision of law;
 - b. any claim arising out of response actions at, or in connection with, the Site, including any claim under the United States Constitution, the State Constitution, the Tucker Act, 28 U.S.C. § 1491, the Equal Access to Justice Act, 28 U.S.C. § 2412, as amended, or at common law; or
 - c. any claim against the United States pursuant to Sections 107 and 113 of CERCLA, 42 U.S.C. §§ 9607 and 9613, relating to the Work or payment of Future Response Costs.
102. These covenants not to sue shall not apply in the event the United States brings a cause of action or issues an order pursuant to the reservations set forth in Subparagraphs 99(b), (c), and (e) - (g), but only to the extent that Respondent's claims arise from the same response action, response costs, or damages that the United States is seeking pursuant to the applicable reservation.

103. Respondent reserves, and this Settlement Agreement is without prejudice to, claims against the United States subject to the provisions of Chapter 171 of Title 28 of the United States Code, for money damages for injury or loss of property or personal injury or death caused by the negligent or wrongful act or omission of any employee of the United States while acting within the scope of his office or employment under circumstances where the United States, if a private person, would be liable to the claimant in accordance with the law of the place where the act or omission occurred. However, any such claim shall not include a claim for any damages caused, in whole or in part, by the act or omission of any person, including any contractor, who is not a federal employee as that term is defined in 28 U.S.C. § 2671; nor shall any such claim include a claim based on EPA's selection of response actions, or the oversight or approval of Respondent's plans or activities. The foregoing applies only to claims that are brought pursuant to any statute other than CERCLA and for which the waiver of sovereign immunity is found in a statute other than CERCLA.
104. Nothing in this Settlement Agreement shall be deemed to constitute approval or preauthorization of a claim within the meaning of Section 111 of CERCLA, 42 U.S.C. § 9611, or 40 C.F.R. § 300.700(d).

XXII. OTHER CLAIMS

105. By issuance of this Settlement Agreement, the United States and EPA assume no liability for injuries or damages to persons or property resulting from any acts or omissions of Respondent. The United States or EPA shall not be deemed a party to any contract entered into by Respondent or its directors, officers, employees, agents, successors, representatives, assigns, contractors, or consultants in carrying out actions pursuant to this Settlement Agreement.
106. Except as expressly provided in Section XIX (Covenant Not to Sue by EPA), nothing in this Settlement Agreement constitutes a satisfaction of, or release from, any claim or cause of action against Respondent or any person not a party to this Settlement Agreement, for any liability such person may have under CERCLA, other statutes, or common law, including, but not limited to, any claims of the United States for costs, damages, and interest under Sections 106 and 107 of CERCLA, 42 U.S.C. §§ 9606 and 9607.
107. No action or decision by EPA pursuant to this Settlement Agreement shall give rise to any right to judicial review, except as set forth in Section 113(h) of CERCLA, 42 U.S.C. § 9613(h).

XXIII. CONTRIBUTION

108. Contribution
- a. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(2) of CERCLA, 42 U.S.C. § 9613(f)(2), and that Respondent is entitled, as of the Effective

Date, to protection from contribution actions or claims as provided by Sections 113(f)(2) and 122(h)(4) of CERCLA, 42 U.S.C. §§ 9613(f)(2) and 9622(h)(4), for “matters addressed” in this Settlement Agreement. The “matters addressed” in this Settlement Agreement are the Work and Future Response Costs.

- b. The Parties agree that this Settlement Agreement constitutes an administrative settlement for purposes of Section 113(f)(3)(B) of CERCLA, 42 U.S.C. § 9613(f)(3)(B), pursuant to which Respondent has, as of the Effective Date, resolved its liability to the United States for the Work and Future Response Costs.
- c. Nothing in this Settlement Agreement precludes the United States or Respondent from asserting any claims, causes of action, or demands for indemnification, contribution, or cost recovery against any persons not parties to this Settlement Agreement. Nothing herein diminishes the right of the United States, pursuant to Sections 113(f)(2) and (3) of CERCLA, 42 U.S.C. § 9613(f)(2)(3), to pursue any such persons to obtain additional response costs or response action and to enter into settlements that give rise to contribution protection pursuant to Section 113(f)(2).

XXIV. INDEMNIFICATION

- 109. Respondent shall indemnify, save, and hold harmless the United States, its officials, agents, contractors, subcontractors, employees, and representatives from any and all claims or causes of action arising from, or on account of, negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, or subcontractors, in carrying out actions pursuant to this Settlement Agreement. In addition, Respondent agrees to pay the United States all costs incurred by the United States, including, but not limited to, attorneys fees and other expenses of litigation and settlement, arising from, or on account of, claims made against the United States based on negligent or other wrongful acts or omissions of Respondent, its officers, directors, employees, agents, contractors, subcontractors, and any persons acting on its behalf or under its control, in carrying out activities pursuant to this Settlement Agreement. The United States shall not be held out as a party to any contract entered into, by, or on behalf of Respondent in carrying out activities pursuant to this Settlement Agreement. Neither Respondent nor any such contractor shall be considered an agent of the United States.
- 110. The United States shall give Respondent notice of any claim for which the United States plans to seek indemnification pursuant to this Section and shall consult with Respondent prior to settling such claim.
- 111. Respondent waives all claims against the United States for damages or reimbursement or for set-off of any payments made, or to be made, to the United States, arising from, or on account of, any contract, agreement, or arrangement

between Respondent and any person for performance of Work on, or relating to, the Site, including, but not limited to, claims on account of construction delays. In addition, Respondent shall indemnify and hold harmless the United States with respect to any and all claims for damages or reimbursement arising from, or on account of, any contract, agreement, or arrangement between Respondent and any person for performance of Work on, or relating to, the Site.

XXV. INSURANCE

112. At least 10 days prior to commencing any on-Site Work under this Settlement Agreement, Respondent shall secure and shall maintain for the duration of this Settlement Agreement comprehensive general liability insurance and automobile insurance with limits of two million dollars (\$2,000,000), combined single limit, naming the EPA as an additional insured. Within the same period, Respondent shall provide EPA with certificates of such insurance and a copy of each insurance policy. Respondent shall submit such certificates and copies of policies each year on the anniversary of the Effective Date. In addition, for the duration of the Settlement Agreement, Respondent shall satisfy, or shall ensure that its contractors or subcontractors satisfy, all applicable laws and regulations regarding the provision of worker's compensation insurance for all persons performing the Work on behalf of Respondent in furtherance of this Settlement Agreement. If Respondent demonstrates by evidence satisfactory to EPA that any contractor or subcontractor maintains insurance equivalent to that described above, or insurance covering some or all of the same risks but in an equal or lesser amount, then Respondent need provide only that portion of the insurance described above that is not maintained by such contractor or subcontractor.

XXVI. FINANCIAL ASSURANCE

113. Within 45 days of the Effective Date, Respondent shall establish and maintain financial security for the benefit of EPA in the amount of \$500,000 in one or more of the following forms, to secure the full and final completion of Work by Respondent:
- a. a surety bond unconditionally guaranteeing payment and/or performance of the Work;
 - b. one or more irrevocable letters of credit, payable to or at the direction of EPA, issued by financial institution(s) acceptable in all respects to EPA equaling the total estimated cost of the Work;
 - c. a trust fund administered by a trustee acceptable in all respects to EPA;
 - d. a policy of insurance issued by an insurance carrier acceptable in all respects to EPA, which ensures the payment and/or performance of the Work;

- e. a corporate guarantee to perform the Work provided by one or more parent corporations or subsidiaries of Respondent, or by one or more unrelated corporations that have a substantial business relationship with Respondent; including a demonstration that any such company satisfies the financial test requirements of 40 C.F.R. Part 264.143(f); and/or
 - f. a corporate guarantee to perform the Work by Respondent, including a demonstration that Respondent satisfies the requirements of 40 C.F.R. Part 264.143(f). If Respondent seeks to make a demonstration pursuant to 40 C.F.R. Part 264.143(f) in order to satisfy the financial assurance requirements of this Section has provided a similar demonstration at other CERCLA or RCRA sites, Respondent must provide EPA with documentation of the prior demonstration(s) so that EPA can account for the amount of financial assurance already being provided at other sites.
114. Any and all financial assurance instruments provided pursuant to this Section shall be in form and substance satisfactory to EPA, determined in EPA's sole discretion. In the event that EPA determines at any time that the financial assurances provided pursuant to this Section (including, without limitation, the instrument(s) evidencing such assurances) are inadequate, Respondent shall, within 30 days of receipt of notice of EPA's determination, obtain and present to EPA for approval one of the other forms of financial assurance listed in Paragraph 113, above. In addition, if at any time EPA notifies Respondent that the anticipated cost of completing the Work has increased, then, within 30 days of such notification, Respondent shall obtain and present to EPA for approval a revised form of financial assurance (otherwise acceptable under this Section) that reflects such cost increase. Respondent's inability to demonstrate financial ability to complete the Work shall in no way excuse performance of any activities required under this Settlement Agreement.
115. If Respondent seeks to ensure completion of the Work through a guarantee pursuant to Subparagraph 113(e) or 113(f) of this Settlement Agreement, Respondent shall: (i) demonstrate to EPA's satisfaction that the guarantor satisfies the requirements of 40 C.F.R. Part 264.143(f); and (ii) resubmit sworn statements conveying the information required by 40 C.F.R. Part 264.143(f) annually, on the anniversary of the Effective Date, to EPA. For the purposes of this Settlement Agreement, wherever 40 C.F.R. Part 264.143(f) references "sum of current closure and post-closure costs estimates and the current plugging and abandonment costs estimates," the current cost estimate of \$500,000 for the Work at the Site shall be used in relevant financial test calculations.
116. If, after the Effective Date, Respondent can show that the estimated cost to complete the remaining Work has diminished below the amount set forth in Paragraph 113 of this Section, Respondent may, on any anniversary date of the Effective Date, or at any other time agreed to by the Parties, reduce the amount of the financial security provided under this Section to the estimated cost of the remaining Work to be performed. Respondent shall submit a proposal for such

reduction to EPA, in accordance with the requirements of this Section, and may reduce the amount of the security after receiving written approval from EPA. In the event of a dispute, Respondent may change the form of financial assurance required hereunder only in accordance with a final decision resolving such dispute pursuant to Section XVI (Dispute Resolution).

117. Respondent may change the form of financial assurance provided under this Section at any time, upon notice to and prior written approval by EPA, provided that EPA determines that the new form of assurance meets the requirements of this Section. In the event of a dispute, Respondent may change the form of financial assurance required hereunder only in accordance with a final decision resolving such dispute pursuant to Section XVI (Dispute Resolution).

XXVII. INTEGRATION/APPENDICES

118. This Settlement Agreement, its appendices, and any deliverables, technical memoranda, specifications, schedules, documents, plans, reports (other than progress reports), etc. that will be developed pursuant to this Settlement Agreement and become incorporated into, and enforceable under, this Settlement Agreement constitute the final, complete, and exclusive agreement and understanding among the Parties with respect to the settlement embodied in this Settlement Agreement. The parties acknowledge that there are no representations, agreements, or understandings relating to the settlement other than those expressly contained in this Settlement Agreement.
119. In the event of a conflict between any provision of this Settlement Agreement and the provisions of any document attached to this Settlement Agreement or submitted or approved pursuant to this Settlement Agreement, the provisions of this Settlement Agreement shall control.
120. The following documents are attached to and incorporated into this Settlement Agreement:
- “Appendix A” is a Map of the NHOU
- “Appendix B” is the ROD.
- “Appendix C” is the ASOW.
- “Appendix D” is the letter from Samuel Under to Benny Dehghi.

XXVIII. EFFECTIVE DATE AND SUBSEQUENT MODIFICATION

121. This Settlement Agreement shall be effective 5 days after the Settlement Agreement is signed by the Assistant Director of EPA Region IX’s Superfund Division, California Site Cleanup Branch.

122. This Settlement Agreement may be amended by mutual agreement of EPA and Respondent. Amendments shall be in writing and shall be effective when signed by EPA. EPA Project Managers do not have the authority to sign amendments to the Settlement Agreement.
123. No informal advice, guidance, suggestion, or comment by the EPA Project Manager or other EPA representatives regarding reports, plans, specifications, schedules, or any other writing submitted by Respondent shall relieve Respondent of its obligation to obtain any formal approval required by this Settlement Agreement, or to comply with all requirements of this Settlement Agreement, unless it is formally modified.

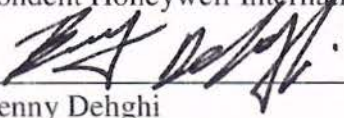
XXIX. NOTICE OF COMPLETION OF WORK

124. When EPA determines, after EPA's review of the Final Report, that all Work has been fully performed in accordance with the other requirements of this Settlement Agreement, with the exception of any continuing obligations required by this Settlement Agreement, including but not limited to payment of Future Response Costs, EPA will provide written notice to Respondent. If EPA determines that any such Work has not been completed in accordance with this Settlement Agreement, EPA will notify Respondent, provide a list of the deficiencies, and require that Respondent modify the Work Plan if appropriate to correct such deficiencies. Respondent shall implement the modified and approved Work Plan and shall submit the required deliverables. Failure by Respondent to implement the approved modified Work Plan shall be a violation of this Settlement Agreement.

THE UNDERSIGNED SETTLING PARTY enters into this Settlement Agreement in the matter of U.S. EPA Region IX CERCLA Docket No. 2012-04, relating to well NHE-2 in the North Hollywood Operable Unit of the San Fernando Valley Superfund Site, Area 1:

Agreed this 5th day of February, 2013.

For Respondent Honeywell International Inc.

By: 
Benny Dehghi

Title: Manager, Remediation & Evaluation Services

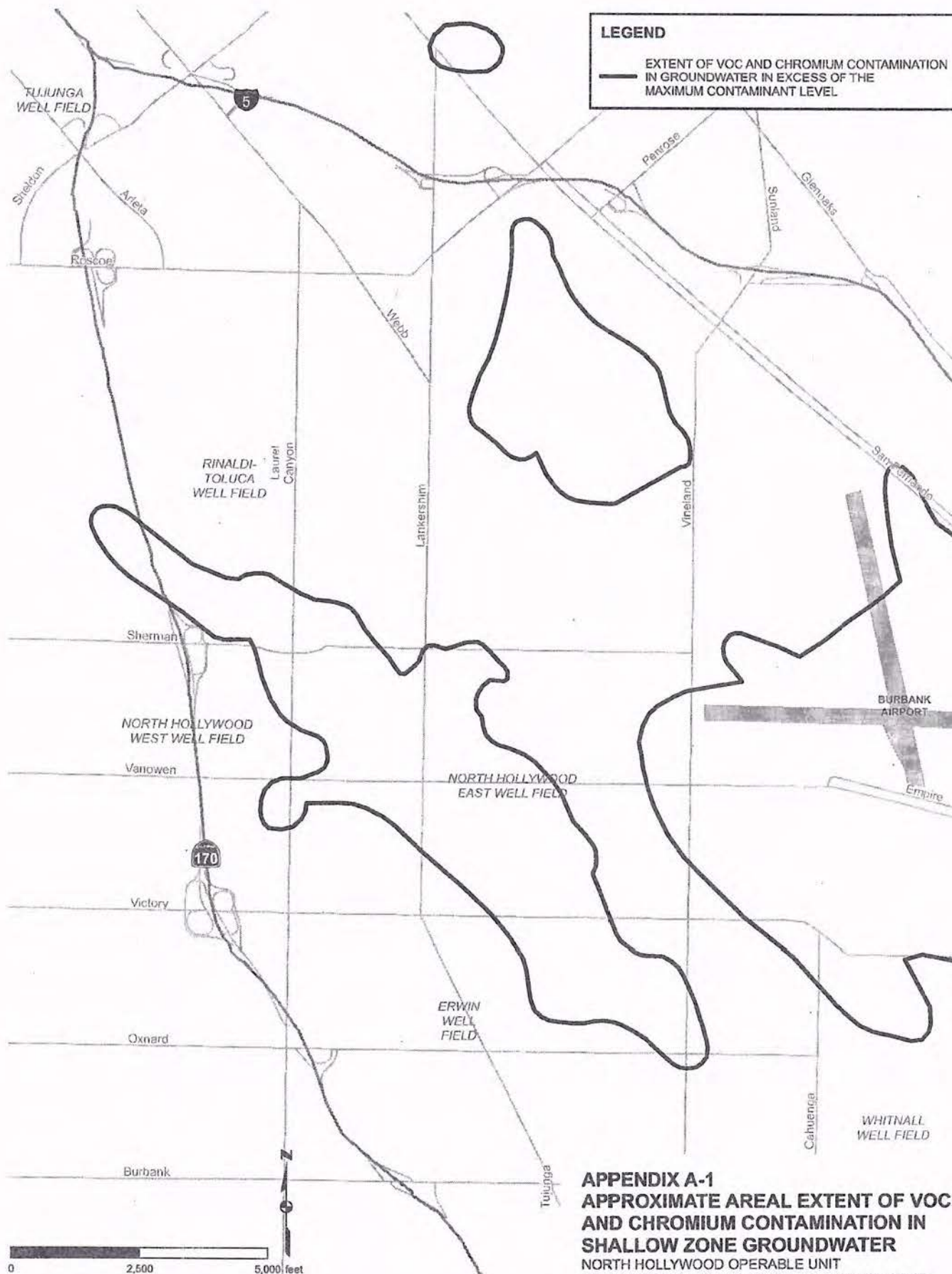
It is so ORDERED AND AGREED this 1st day of March, 2013.

BY: Kelly S Mah for _____
Kathleen Salyer
Assistant Director, Superfund Division
California Site Cleanup Branch
Region IX
U.S. Environmental Protection Agency

DATE: 3/1/13

EFFECTIVE DATE: March 6, 2013

Appendix A



APPENDIX A-1
APPROXIMATE AREAL EXTENT OF VOC
AND CHROMIUM CONTAMINATION IN
SHALLOW ZONE GROUNDWATER
 NORTH HOLLYWOOD OPERABLE UNIT
 SAN FERNANDO VALLEY AREA 1 SUPERFUND SITE



Appendix B

Appendix B can be found at:

[http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/3dc283e6c5d6056f88257426007417a2/691791d0838169028825764a005cc86b/\\$FILE/SFV%20Area%201%20-%20ROD%209-30-09.pdf](http://yosemite.epa.gov/r9/sfund/r9sfdocw.nsf/3dc283e6c5d6056f88257426007417a2/691791d0838169028825764a005cc86b/$FILE/SFV%20Area%201%20-%20ROD%209-30-09.pdf)

Appendix C

Appendix C

Statement of Work
for Alternate NHE-2 Treatment and Disposal Approach

North Hollywood Operable Unit
San Fernando Valley (Area 1) Superfund Site NHE-2
Los Angeles County, California

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Acronyms

ARAR	Applicable or Relevant and Appropriate Requirement
ARD	Alternate Remedial Design
ASOW	Alternate Statement of Work
CD	Consent Decree
CDPH	California Department of Public Health
CFR	Code of Federal Regulations
CQAPP	Construction Quality Assurance Project Plan
CSI	Construction Specification Institute
DQO	Data Quality Objective
DTSC	CA Department of Toxic Substances Control
EPA	U.S. Environmental Protection Agency
FFS	Focused Feasibility Study
FSP	Field Sampling Plan
HASP	Health and Safety Plan
ICIAP	Institutional Controls Implementation and Assurance Plan
LADWP	Los Angeles Department of Water and Power
LCA	Life Cycle Analysis
NHOU	North Hollywood Operable Unit
O&M	Operation and Maintenance
OU	Operable Unit
PCE	Tetrachloroethylene
QA/QC	Quality Assurance and Quality Control
QAPP	Quality Assurance Project Plan
QMP	Quality Management Plan
RA	Remedial Action
RAOs	Remedial Action Objectives
RD	Remedial Design
RD/RA	Remedial Design and Remedial Action
ROD	Record of Decision
RWQCB	CA Regional Water Quality Control Board
SAP	Sampling and Analysis Plan
SFV	San Fernando Valley
SMP	Site Management Plan
SOW	Statement of Work
TCE	Trichloroethylene
VE	Value Engineering
VOC	Volatile Organic Compounds

1.0 Introduction

This Statement of Work is the Alternate Statement of Work ("ASOW"), which sets forth the activities required to be performed by Honeywell International Inc. ("Honeywell") under the Administrative Settlement Agreement and Order on Consent between the United States and Honeywell, dated 3/1/2013 ("Settlement Agreement" or "NHE-2 AOC") to undertake remedial design ("RD") activities. These RD activities include various procedures and technical analyses, to produce a detailed set of plans and specifications for implementation of an alternative to the approach for treatment and disposal of water extracted by well NHE-2 ("Alternate NHE-2 Treatment and Disposal Approach") selected in EPA's September 30, 2009 Record of Decision for the North Hollywood Operable Unit ("NHOU" or "Site") of the San Fernando Valley Area 1 Superfund Site (the "Second Interim ROD"), which selected a new interim remedy for the NHOU ("Second Interim Remedy"). This ASOW is Appendix C to the Settlement Agreement. All terms used in this ASOW shall have the same meanings as defined in the Settlement Agreement.

In the event that completion of any Work required by the NHE-2 AOC and this ASOW is dependent on work required by the Administrative Settlement Agreement and Order on Consent for Remedial Design for the Second Interim Remedy at the NHOU U.S. EPA Region IX CERCLA Docket No. 2011-01, reached between EPA, Honeywell International Inc., and Lockheed Martin Corporation ("RD AOC") being completed first, the schedule for completion of Work required by the NHE-2 AOC and this ASOW shall be adjusted to accommodate the RD AOC schedule, upon approval by EPA. The RD undertaken pursuant to the RD AOC must achieve the Remedial Action Objectives ("RAOs") set forth in the Second Interim ROD. Once the operational parameters for well NHE-2 (e.g., well depth, screen interval, and flow rate) are established pursuant to the RD AOC, the RD activities undertaken pursuant to the NHE-2 AOC and this ASOW must be consistent with those parameters.

1.1 Purpose

The purpose of this ASOW is to set forth the requirements of the Alternate NHE-2 Treatment and Disposal Approach. The Alternate RD ("ARD") is generally defined as the activities to develop the final plans and specifications, general provisions, and specific requirements necessary for the Alternate NHE-2 Treatment and Disposal Approach to be constructed. This ASOW also provides the framework for coordinating the RD activities for the Alternate NHE-2 Treatment and Disposal Approach.

1.2 General Requirements

Honeywell shall furnish all necessary and appropriate personnel, materials, and services needed for, or incidental to, performing and completing the Work.

1.2.1 Performance Standards

Honeywell shall implement the ARD to achieve the Performance Standards and comply with the provisions and requirements of the AOC and this ASOW. The RD for the Second Interim Remedy will determine the appropriate flow rate for well NHE-2 to ensure that the Second Interim Remedy meets or exceeds the Performance Standards, including the RAOs and the cleanup levels set forth in the Second Interim ROD, all Applicable or Relevant and

Appropriate Requirements ("ARARs"), and all requirements set forth in the RD AOC.

The RAOs specified in the ROD are:

- Prevent exposure to contaminated groundwater above acceptable risk levels.
- Contain areas of contaminated groundwater that exceed the MCLs and notification levels to the maximum extent practicable.
- Prevent further degradation of water quality at the Rinaldi-Toluca and North Hollywood West production wells by preventing the migration toward these well fields of the more highly contaminated areas of the VOC plume located to the east/southeast.
- Achieve improved hydraulic containment to inhibit horizontal and vertical contaminant migration in groundwater from the more highly contaminated areas and depths of the aquifer to the less contaminated areas and depths of the aquifer, including the southeast portion of the NHOU in the vicinity of the Erwin and Whitnall production well fields.
- Remove contaminant mass from the aquifer.

1.2.2 Items Covered by ARD

Honeywell shall design a groundwater treatment and disposal system for NHE-2. The Work required by the ASOW includes the following specific components:

Hexavalent Chromium Treatment for Well NHE-2

Wellhead treatment for chromium is required by the ROD for well NHE-2. The Alternate NHE-2 Treatment and Disposal Approach will address chromium treatment of the water from NHE-2.

1,4-Dioxane Treatment of Extraction Well NHE-2

Wellhead treatment for 1,4-dioxane is required by the ROD for well NHE-2. The Alternate NHE-2 Treatment and Disposal Approach will address 1,4-dioxane treatment of the water from NHE-2.

Treatment of VOCs in Extracted Groundwater

Wellhead treatment for VOCs is required by the ROD for well NHE-2. The Alternate NHE-2 Treatment and Disposal Approach will address VOC treatment of the water from NHE-2.

Use of Treated Groundwater

The ROD specifies that the treated water will be delivered to LADWP for use in their drinking water supply. Use of treated NHOU water in LADWP's drinking water supply requires compliance with federal and state drinking water standards, including the CDPH's Policy Guidance for Direct Domestic Use of Extremely Impaired Sources, CDPH Policy Memorandum 97-005 ("CDPH 97-005"), which establishes a specific process for the evaluation of, and selection of treatment systems for, impaired water sources before they can be approved for use as drinking water. To the extent that CDPH 97-005

guidance applies to NHE-2, the guidance will be considered throughout the RD process.

Honeywell may choose to propose an alternate use for the treated water as part of its design. If an alternate use is proposed, deliverables required by the ASOW shall identify and address all requirements that apply to the alternative use. Examples of potentially applicable requirements include, but are not limited to: CDPH 97-005 or the Basin Plan

1.2.3 Guidance and Reference Material

Honeywell shall comply with all guidance issued by EPA for conducting RD and the activities described herein, to the extent deemed appropriate by EPA. A list of primary guidance and reference material is attached (Attachment 2). In all cases, Honeywell shall use the most recently issued guidance, as appropriate.

In addition, Honeywell shall implement EPA's *Greener Cleanups Policy - EPA REGION 9*, issued September 14, 2009. EPA Headquarters is also finalizing additional guidance on its "Superfund Green Remediation Strategy", which shall be consulted and followed.

1.2.4 Communication

The primary EPA contact for activities to be conducted pursuant to this Statement of Work is the EPA Project Manager, Kelly Manheimer, (415) 972-3290, manheimer.kelly@epa.gov.

The RWQCB contact is Lawrence Moore, (213) 576-6730;
lmoore@waterboards.ca.gov.

The CDPH contact is Chi Diep, (818-551-2016), chi.diep@cdph.ca.gov.
Susan Brownstein should be copied on all emails:
Susan.Brownstein@cdph.ca.gov

The LADWP contact is Vahe Dabbaghian, (213) 367-3543;
vahe.dabbaghian@ladwp.com.

1.2.5 EPA Oversight

EPA will provide oversight of Honeywell's activities throughout the ARD. EPA will review deliverables to ensure that the ARD and all Work correctly identifies and achieves the Performance Standards and other requirements outlined above, the AOC, and this ASOW. Where deemed appropriate by EPA in its sole discretion, the RWQCB will be given a reasonable opportunity for review and comment. Notwithstanding any action by EPA, Honeywell remains fully responsible for achieving the Performance Standards and other requirements, the AOC, and this ASOW. Nothing in the AOC, this ASOW, EPA's approval of the ARD, or any other submission, shall be deemed to constitute a warranty or representation of any kind by EPA that full performance of the ARD will achieve the applicable Performance Standards. Honeywell's compliance with submissions approved by EPA does not foreclose EPA from seeking additional work to achieve the applicable Performance Standards.

1.2.6 Timeframes, Deliverables Review

The timeframes and deadlines for the submission of each deliverable are listed in Attachment 1. The "EPA Estimated Review Period" specified in Attachment 1 is set by EPA as a goal. EPA will strive to achieve this goal to keep the project on schedule. However, if EPA is unable to meet one or more of these review periods, and deliverables from Honeywell are affected by EPA's delay, the deadlines for those deliverables will be modified to reflect such delay.

All deliverables will be submitted for review in accordance with the AOC and Attachment 1 of this ASOW, and will either be approved or disapproved by EPA. If EPA disapproves the deliverable and requests modifications, Honeywell shall revise the deliverable and resubmit it to EPA, as provided in the AOC. After Honeywell's receipt of EPA comments on any draft document, if any, Honeywell shall submit for EPA review and approval a final document within 30 days of receipt of such comments, or other due date as specified in EPA's comment letter. Honeywell shall submit the major deliverables using a form approved by EPA.

2.0 Project Planning and Support

The purpose of this task is to determine how the site-specific Performance Standards will be satisfied. The following activities shall be performed as part of the project planning and support task:

2.1 Personnel

Honeywell has retained MWH Americas Inc. as the Supervising Contractor to perform the Work. Honeywell will provide EPA with a copy of the Supervising Contractor's Quality Management Plan ("QMP") 15 days after the Effective Date of the Settlement Agreement.

Honeywell shall demonstrate that MWH Americas Inc. has a quality assurance system that complies with ANSI/ASQC E4-1994, "Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs" (American National Standard, January 5, 1995). by submitting a copy of MWH America Inc.'s QMP. The QMP should be prepared in accordance with "EPA Requirements for Quality Management Plans (QA/R-2)" (EPA/240/B-01/002, March 2001, reissued May 2006) or equivalent documentation as determined by EPA.

In addition, Honeywell will identify MWH Americas Inc. as Sustainability Manager in the QMP who shall be responsible for ensuring that each phase of the project is reviewed to identify a sustainable path that is appropriate and reasonable for the project. Best sustainable practices shall be reviewed for appropriate and reasonable inclusion, including Leadership in Energy and Environmental Design ("LEED"), Life Cycle Analysis ("LCA"), etc.

2.2 Develop Site-Specific Plans

Honeywell shall prepare and submit for EPA approval the site-specific plans specified in this ASOW, in accordance with Attachment 1 of this ASOW. Where deemed appropriate by EPA in its sole discretion, the RWQCB will be given a reasonable opportunity for review and comment. The following describes the site-specific plans that are required.

2.2.1 ARD Work Plan

Honeywell shall submit a draft ARD Work Plan, in accordance with the schedule in Attachment 1. The deliverables and schedule approved by EPA in the final ARD Work Plan shall become requirements of this ASOW and the NHE-2 AOC.

The ARD Work Plan shall include the following information:

- **Project Description:** A statement of the problem and any potential problems posed by the site and how the objectives of the ARD will address these problems. A discussion of the proposed extraction and treatment options to be evaluated and the approach in evaluating the options.
- **Background:** A background summary setting forth:
 - A brief description of the NHOU including any geographic, physiographic, hydrologic, geologic, demographic, ecological, cultural, or natural resource features that are relevant to the ARD.
 - A brief synopsis of the history of the area including a summary of past disposal practices and a description of previous responses that have been conducted by local, state, federal, or private parties at the NHOU.
 - A summary of the existing data including physical and chemical characteristics of the contaminants identified and their distribution among the environmental media at the NHOU that is relevant to the ARD.
- A response to the November 2, 2010, Comments to NHE-02 Wellhead Treatment Workplan Pursuant to California Water Code Section 13304 Under Cleanup and Abatement Order No. R4-2003-037, issued by the RWQCB, by describing how the comments shall be addressed in future deliverables under this ASOW.
- Results of a Pre-Design Investigation for NHE-2 Long-Term Treatment, documented in a June 5, 2012 report and completed in accordance with the USEPA-approved *Supplemental Investigation Workplan for NHE-2 Long-Term Treatment* (Workplan) dated October 25, 2011.
- A conceptual site model (CSM), consistent with NHOU new remedy CSM and data gaps analysis. Honeywell shall obtain and evaluate existing data and documents pertinent to the implementation of this AOC/ASOW and prepare a conceptual site model and data gaps analysis. The ARD Work Plan will describe the design data gaps and determine the need for a Design Investigation Work Plan to gather the additional data necessary to support the design.
- **Scope of Work:** A discussion of the detailed scope of work to be performed during the ARD. The Scope of Work shall describe the technical approach to each task to be performed, including: a detailed description of each task; the assumptions used; the identification of any technical uncertainties (with a proposal for the resolution of those uncertainties); the information needed for each task; any information to be produced during and at the conclusion of each task; and a description of the deliverables that will be submitted to EPA
- **ARD Team Organization and Coordination:** A discussion and organizational charts for Honeywell's organization, the ARD project organization, coordination and communications procedures, and a discussion of the roles and responsibilities of the ARD team. Honeywell shall identify any subcontractors it plans to use to accomplish all or part of any task identified.

- ARD Project Schedule: The schedule shall include, but not be limited to, all design deliverables listed in Attachment 1 of this ASOW. The schedule for the ARD must be coordinated with the Remedial Design for the NHOU 2nd Interim Remedy ROD. Specifically, the Preliminary Design cannot be completed until the flow rate for NHE-2 is determined and approved by regulatory stakeholders because modification of the well, if necessary, and the design flow rate for NHE-2 will be determined during the Remedial Design for the NHOU Second Interim ROD.
- Permits, Access and Third Party Agreement(s): Any and all permits, property leases, and/or easements required for implementation of the ARD, as well as a discussion of the substantive permit requirements, schedule of permit applications, property acquisitions, and third party agreements.
- Site Management: a description of how access, security, management responsibilities, decontamination, and waste disposal are to be handled during ARD.
- Sustainability Approach: a thorough description of the process or plans to be implemented by Honeywell to ensure that the entire project is managed in a sustainable manner as much as practicable, and that sustainability factors are considered as part of the remedial design. Honeywell shall make best efforts to reduce short term impacts of cleanup beyond minimum legal requirements, such as, but not limited to: use of rail transport rather than trucking, use of alternative fuels (e.g. biodiesel with ultra low sulfur diesel for off road and on road vehicles), idle reduction, use of equipment retrofitted with emissions controls (e.g., diesel oxidation catalyst, diesel multistage filter, or diesel particulate filter). Other examples include waste recycling, purchasing materials with post-consumer recycled content, and water usage reduction. Information and resources are available through Smart Energy Resources Guide (SERG) and Green Remediation: Incorporating Sustainable Environmental Practices into Remediation of Contaminated Sites.
- Design and construction approach: a preliminary discussion of whether design and construction will be implemented utilizing the design/bid/build or design/build process.
- Long-term plans: a description of the long-term approach to be employed for the treatment and disposal system. If, at any point in the future, the water extracted from NHE-2 is intended to be routed back to the treatment system for the Second Interim Remedy, and then to LADWP as drinking water, a plan for compliance with CDPH's 97-005 policy shall be included.
- Description of Deliverables: Deliverables will include:
 1. Design Investigation Work Plan (if needed);
 2. Health and Safety Plan/Contingency Plan ("HASP");
 3. Sampling and Analysis Plan ("SAP"), (if needed);
 4. Remedial Design Quality Assurance Project Plan ("QAPP");
 5. Monthly Progress Reports;
 6. Preliminary design report (30%);
 7. Intermediate design report (60%), if applicable depending upon the contracting strategy;

8. Pre-final/final design report (if applicable depending upon the contracting strategy);
9. Annual Performance Evaluation Report; and,
10. Draft O&M Plan.

Honeywell shall also identify any additional deliverables believed necessary, and include a schedule for the submission of these deliverables.

2.2.2 Design Investigation Work Plan

Pre-Design Investigation for NHE-2 Long-Term Treatment was completed and is documented in a June 5, 2012 report. The investigation was completed in accordance with the Workplan. The Pre-Design Investigation was intended to meet the investigation needs for the ARD. However, if needed, a Design Investigation Work Plan will be prepared and submitted for EPA approval within 30 days of receipt of ARD Work Plan approval by EPA. Upon approval of the final Design Investigation Plan by EPA, Honeywell shall implement the Design Investigation.

2.2.3 Health and Safety Plan/Contingency Plan

A site-specific Health and Safety Plan ("HASP") will be prepared to address any field activities that Honeywell determines, and EPA approves, are required to implement the Work. The HASP must specify how workers will be protected during any site activities through the identification, evaluation, and control of health and safety hazards. The HASP shall be in conformance with U.S. Occupational Safety and Health Administration requirements in Title 29 of the Code of Federal Regulations ("CFR") (sections 1910 and 1926), and any other applicable requirement(s). The contingency plan portion of the HASP shall specify the actions to be taken to protect the local community in the event of an accident or emergency. EPA will review, but will neither approve nor disapprove, the HASP. Each of Honeywell's employees, and contractors, etc., is responsible for ensuring that its workers follow applicable federal and State worker health and safety regulations. Contingency plans shall be posted at a visible location during all field work.

2.2.4 Sampling and Analysis Plan

The Sampling and Analysis Plan ("SAP") shall address any field activities that Honeywell determines, and EPA approves, are required to implement the Work. The SAP shall include a Quality Assurance Project Plan ("QAPP"), a Field Sampling Plan ("FSP"), and a schedule for implementation of sampling, analysis, and reporting activities. Upon EPA approval of the SAP, Honeywell shall proceed to implement the sampling activities described in the SAP.

- *Quality Assurance Project Plan.* The QAPP must be prepared in accordance with the *EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations*, and with the *EPA Guidance on Systematic Planning Using the Data Quality Objectives Process* and other applicable guidance (see Attachment 2). The QAPP shall describe project objectives, organizational and functional activities, data quality objectives ("DQOs"), and quality assurance and quality control ("QA/QC") protocols that shall be used to achieve the desired DQOs. The DQOs shall, at a minimum, reflect use of analytical methods for obtaining data of sufficient quality to meet National Contingency Plan requirements as identified at 40 CFR 300.435(b). In addition, the QAPP shall address personnel qualifications, sampling procedures, sample custody, analytical

procedures, document control procedures, preservation of records, data reduction, data validation, data management, procedures that will be used to enter, store, correct, manipulate, and analyze data. It shall also include protocols for transferring data to EPA in electronic format, and document management. The QAPP shall provide sufficient detail to demonstrate that:

- The project technical and data quality objectives are identified;
- The measurements or data acquisition methods are appropriate for achieving project objectives;
- Assessment procedures are sufficient for confirming that data of the type and quality needed and expected are obtained; and,
- Any limitations on the use of the data are identified and documented.

All analytical data, whether or not validated, shall be submitted to the EPA within 60 calendar days of sample shipment to the laboratory, or 14 days of receipt of analytical results from the laboratory, whichever occurs first. All analytical data shall be validated and submitted to EPA in an approved electronic format within 90 calendar days of the sample shipment to the laboratory. Well construction information shall be submitted to EPA at the completion of the initial sampling activities, or within 90 days after completion of a well, whichever is earlier.

- *Field Sampling Plan.* The FSP must be in accordance with the regional guidance document *EPA Region IX Sampling and Analysis Plan Guidance and Template* (R9QA/002.1, April, 2000); and other applicable guidance (see Attachment 2). The FSP shall describe sampling objectives, analytical parameters, analytical methods, sampling locations and frequencies, analytical holding times, sampling procedures and equipment, sample preservation, sample packing, QA/QC samples, sample paperwork and chain-of-custody procedures, sample handling and shipping, management of investigation-derived wastes, and planned uses of the data. The FSP must define the sampling and data collection methods that will be used for a project. The FSP shall be written so that a field sampling team unfamiliar with the project would be able to gather the samples and field information required. The FSP shall include a schedule that describes activities that must be completed in advance of sampling, including acquisition of property, access agreements, and arrangements for disposal of investigation-derived waste.

2.2.5 Remedial Design Quality Assurance Project Plan

A RD QAPP shall be submitted to EPA for review and approval. This plan shall describe the quality control activities that Honeywell will implement to ensure that the ARD is conducted in an effective and compliant manner.

2.3 Project Status Reports and Meetings

2.3.1 Periodic Project Status Update

As requested by EPA, Honeywell shall prepare and submit electronic Project Status Updates to EPA and RWQCB that briefly document the progress and current status of each task required by this ASOW and approved ARD Work

Plan. Each update should consist of a simple tracking form for the tasks, a narrative of problems arising, and description of steps planned or underway to mitigate them. In addition, teleconferences may be scheduled to review the progress during particularly active times, at the discretion of the EPA Project Manager.

2.3.2 Monthly Progress Report

After submittal of the ARD Work Plan, Honeywell shall prepare and submit written Monthly Progress Reports that:

- (a) describe the actions which have been taken toward achieving compliance with the requirements of this ASOW and AOC during the previous month;
- (b) include a summary of all results of sampling and tests and all other data received or generated by Honeywell in the previous month;
- (c) identify all plans, reports, and other deliverables required by this ASOW and AOC completed and submitted during the previous month;
- (d) describe all actions, including, but not limited to, data collection and implementation of work plans, which are scheduled for the next six (6) weeks and provide other information relating to the progress of the design, construction, and implementation activities, including, but not limited to, critical path diagrams, Gantt charts and Pert charts;
- (e) include information regarding percentage of completion, unresolved delays encountered or anticipated that may affect the future schedule for implementation of the work, and a description of efforts made to mitigate those delays or anticipated delays; and,
- (f) include any modifications to the work plans or other schedules that Honeywell has proposed to EPA or that have been approved by EPA.

If requested by EPA, Honeywell shall also provide briefings for EPA to discuss the progress of the Work.

2.3.3 Progress Meetings

Honeywell shall consult with EPA during the design process, and shall discuss and obtain approval for critical decisions in meetings and conversations with EPA. Following such meetings and conversations, Honeywell shall prepare and submit for EPA approval, draft meeting summary notes within five (5) days of the discussion. Honeywell shall document all decisions made and rationale for those decisions. Meeting notes shall include appropriate layout and design drawings or figures used in the meetings. The meeting summary deliverable shall be factual and shall present any technical disputes in an unbiased manner.

2.3.4 Annual Performance Evaluation Report

At the end of each fiscal year (September 30), Honeywell shall provide an Annual Performance Evaluation Report. The format and exact content of the updates and reports shall be determined in the ARD Work Plan.

3.0 Community Relations Support

Honeywell shall provide community relations support to EPA throughout the performance of the Work under this AOC and in accordance with the *Superfund Community Involvement Handbook*, April 2005. Community relations support may include the following subtasks:

Fact Sheet Preparation Assistance: Honeywell shall, at EPA's request, assist with the preparation of fact sheets that inform the public about activities related to the ARD, the schedule for RA, activities to be expected during construction, provisions for responding to emergency releases and spills, and any potential inconveniences such as excess traffic and noise that could affect the community during the RA.

Technical Support: Honeywell shall, at EPA's request, provide technical support for community relations, which may include providing technical input to news releases, fact sheets, briefing materials, and other community relations vehicles.

Public Meeting Support: Honeywell shall, at EPA's request, prepare presentation materials and provide logistical support for public meetings and open houses.

Public Notice: Honeywell shall, at EPA's request or as otherwise needed, provide individual notice to residents in the vicinity of areas where work will be performed by Honeywell.

Reporting: Honeywell shall, at the request of EPA, provide verbal status reports concerning the work performed by Honeywell.

Report Copies: Honeywell shall, at the request of EPA, provide extra copies for the public of final deliverables or other documents produced pursuant to this Statement of Work.

4.0 Environmental Sample and Data Acquisition

Environmental sample acquisition entails collecting environmental samples and information required to support the Work, in this case, the Design Investigation outlined in Section 2.2.2 of this ASOW. The planning for this task, including the scheduling, shall be accomplished in accordance with the SAP of this ASOW, and shall result in the plans and timeframes required to collect the field data. Sample acquisition starts with EPA approval of the SAP and continues as defined in the SAP until the Work performed under the AOC is completed. Honeywell shall perform the following field activities or combination of activities for sample acquisition in accordance with the EPA-approved SAP:

4.1 Mobilization and Demobilization

Provide the necessary personnel, equipment, and materials for mobilization and demobilization to and from the NHO for the purpose of conducting the sampling program approved in the SAP. Coordinate with and allow EPA to conduct split sampling whenever requested by EPA.

4.2 Field Investigation

Conduct environmental sampling / field investigations as described in the EPA-approved SAP.

4.3 Sample Analysis

Honeywell shall arrange for and carry out the analysis of environmental samples, collected during the previous task, according to the SAP approved by EPA. The sample analysis task begins with arranging the sample analysis work with a qualified laboratory and after completion of the field sampling program. This task ends with Honeywell verifying that the laboratory has completed the requested analyses and

has submitted sample data packages for full third party validation (Region 9 Tier 3) per the frequency defined in the approved monitoring specific QAPP. Normally this would be 20% for routine monitoring.

Honeywell shall demonstrate in advance and to EPA's satisfaction that each laboratory used is qualified to conduct the proposed work and satisfies the requirements specified in the AOC. EPA may require that Honeywell submit detailed information to demonstrate that the laboratory is qualified to conduct the work, including information on personnel qualifications, equipment and material specification, and laboratory analyses of performance samples (blank and/or spike samples). In addition, EPA may require submittal of data packages equivalent to those generated by the EPA Contract Laboratory Program. Electronic data deliverables shall be submitted to EPA.

4.4 Analytical Support and Data Validation

Honeywell shall arrange for and carry out third party data validation of the analytical data received from the laboratory during the previous task, according to the approved SAP. For purposes of this ASOW, "third party" is defined as any party other than Respondent and the entity directly performing the monitoring and/or analytical activities. The data validation task begins with Honeywell transmitting all sample data packages received from the laboratory for validation in accordance with *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, and *USEPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review*. This task ends with Honeywell providing EPA with data validation reports for the analytical data received from the laboratory.

4.5 Data Evaluation

Honeywell shall organize and evaluate both pre-existing data and data gathered as part of this ASOW; such data will be used later in the ARD effort. This work shall be performed in accordance with the EPA-approved SAP. The *EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis* should also be consulted for this operation. Data evaluation for each sampling event begins with the receipt of validated analytical data and ends with the submittal of the Data Evaluation Summary Report described below. Specifically, Honeywell shall perform the following activities or combination of activities during the data evaluation effort:

4.5.1 Data Usability Evaluation and Field QA/QC

Described in the EPA-approved SAP.

4.5.2 Data Reduction, Tabulation, and Evaluation

Tabulate, evaluate, and interpret the data. Present data in an appropriate format for final data tables. Design and set up an appropriate database for pertinent information collected that will be used during the performance of the Work. Submit electronic database in a format compatible with EPA's existing database (to enable efficient import into that system). Submit processed data tables to EPA along with each data evaluation report.

4.5.3 Development of Design Investigation Report

Honeywell shall evaluate and present results in a data evaluation report, in this case a Design Investigation Report, which shall be submitted to EPA for review and approval, within 90 days of the completion of the monitoring or

sampling event. Sufficient information must be provided in this report to enable EPA to assess the adequacy of the work performed.

5.0 Alternate Remedial Design

Alternate Remedial Design activities shall include the preparation of clear and comprehensive design documents, construction plans and specifications, and other design activities needed to implement the Work and satisfy all Performance Standards set forth in the AOC and this ASOW. All plans and specifications shall be developed in accordance with relevant portions of the EPA Remedial Design/Remedial Action Handbook, and in accordance with the schedule set forth in the approved ARD Work Plan.

For a conventional design-bid-build approach, all four phases of design including Preliminary Design (approximately 30 percent design completion), Intermediate Design (approximate 60 percent completion), Pre-final Design (approximately 90 percent completion) and Final Design (100 percent completion) shall be required. Should the project be executed design-build, the Pre-final Design and Final Design will not be required. These requirements are described below.

5.1 Preliminary Design (30%)

Honeywell shall conduct Preliminary Design activities in accordance with the ARD Work Plan and Attachment 1 of this ASOW.

The components that constitute the Preliminary Design are described below and shall be submitted to EPA for review and approval. Preliminary Design begins with the initial design and ends with the completion of approximately 30 percent of the design effort. Honeywell shall include the following components in the Preliminary Design:

5.1.1 Design Criteria

The Design Criteria shall define in detail the technical parameters upon which the design will be based. Specifically, the Design Criteria shall include the preliminary design assumptions and parameters, including, as appropriate:

- Volume and types of each medium requiring treatment;
- Assumed treatment plant influent quality over the design life of the treatment system(s), with a description of the methodology used to develop the estimate (including discussion of the likelihood and magnitude of short-term and long-term changes in influent concentrations);
- Treatment schemes (including all media and byproducts), rates, and required qualities of waste streams (i.e., input and output rates, influent and effluent qualities, potential air emissions, etc.);
- Filtration, disinfection, corrosion control, or other treatment requirements in addition to removal of site contaminants;
- Delivery locations, rates, and pressures for the treated groundwater, and other conveyance system assumptions for supplying treated groundwater;
- Description of how the design will achieve Performance Standards;
- Long-term operation and maintenance ("O&M") and performance monitoring requirements;

- An LCA evaluation for all components of the system and a method for minimizing or offsetting impacts, including all carbon emissions;
- Demonstration of the integration of the preliminary design with the overall design for the Second Interim Remedy;
- All ARARs, pertinent codes, and standards to be complied with; and,
- Technical factors of importance to the design and construction including use of currently accepted environmental control measures, constructability of the design, end-use of land, and use of currently acceptable construction practices and techniques and sustainability factors.

5.1.2 Preliminary Delivery Plan and Schedule

The Delivery Plan and Schedule shall describe how the Remedial Action ("RA") for the Alternate NHE-2 Treatment and Disposal Approach is to be delivered, how contracting shall be done, the contracting strategy, the organizational structure, communication strategy, etc. The schedule shall include an evaluation of a phased approach to expedite the RA.

The contracting strategy shall be carefully described. Specifically, Honeywell shall indicate if they are interested in pursuing a conventional design/bid/build strategy, or the design/build approach to design and construction. The conventional design/bid/build approach is one in which the design is taken to the 100 percent completion level to allow contractor bidding of the construction work. The design/build approach is one in which the design is developed to about the 60 percent completion level followed by subsequent field engineering during construction. EPA will indicate preliminary approval of the approach as part of ARD Work Plan approval. The final decision will be made with the approval of the Preliminary Design.

5.1.3 Preliminary Construction Schedule

A preliminary RA schedule appropriate to the size and complexity of the project shall be included in the Preliminary Design.

5.1.4 Specifications Outline

The general specifications outline shall include all specification sections to be used. The format and organization shall be consistent with the Construction Specification Institute ("CSI") format.

5.1.5 Preliminary Drawings and Specifications

The drawings and schematics shall reflect organization and clarity. This submittal should include the following:

- An outline or listing of the drawings and schematics;
- Facility representations including a process flow diagram and a preliminary piping and instrumentation diagram;
- A general arrangement diagram (including potential locations of equipment, buildings, roads, and piping); and,
- Site drawings, consisting of engineering drawings submitted in 11-inch x 17-inch sheets (or larger with approval from the EPA Project Manager).

5.1.6 Basis of Design

The Basis of Design shall include a detailed description of the evaluations conducted to select the design approach. It shall include a Summary and Detailed Justification of Assumptions, which shall include:

- Calculations supporting the assumptions;
- A draft process flow diagram;
- Detailed evaluation of how all ARARs will be met;
- A plan for minimizing environmental and public impacts; and,
- A plan for satisfying any permitting requirements, including a status update of the progress of the CDPH 97-005 process.

5.1.7 Easement and Access Requirements

The potential need for land acquisition for access, or any other access or easement issues or requirements shall be identified.

5.1.8 Value Engineering Screening (Optional)

Honeywell may choose to perform Value Engineering ("VE") screening that shall include an evaluation of cost and function relationships, concentrating on high-cost areas. The VE screening shall be performed by an independent Value Engineering group. An "Independent Value Engineering group" is defined as any qualified party other than the individuals that performed the design. However, as necessary, selected individuals from the design team may also participate in the VE screening. The outcome of the screening shall be a recommendation for or against a full-scale VE study based on the potential for cost savings as a result of design changes. VE screening can be performed at the discretion of Honeywell. However, any decisions made as a result of any VE effort that could impact the design of the remedy shall be submitted to EPA for approval.

5.1.9 Approval of the Preliminary Design

The draft Preliminary Design will be submitted to the EPA and the Second Interim Remedy Design Contractor for review in accordance with the NHE-2 AOC. Honeywell shall submit a final Preliminary Design within 45 days of the later of receipt of any EPA comments on the draft Preliminary Design. Upon approval of the final Preliminary Design by EPA, Honeywell shall implement the Intermediate Design.

5.2 Intermediate Design

Honeywell shall conduct Intermediate Design activities in accordance with the ARD Work Plan and the requirements identified below..

The components that constitute the Intermediate Design are described below and shall be submitted to EPA for review and approval in accordance with the AOC and Attachment 1 to this ASOW. Intermediate Design begins with the completion of the Preliminary Design and ends with the completion of approximately 60 percent of the design effort. The level of the Intermediate Design may vary, depending on whether Honeywell proposes and EPA approves, to complete the project on a design/bid/build or design/build basis. The Intermediate Design shall address all prior

EPA comments on the Preliminary Design, and provide a memorandum explaining how specific comments were incorporated or addressed, or a justification as to why not.

Honeywell shall include in the Intermediate Design, at a minimum, the following components:

5.2.1 Update of Construction Schedule

The schedule for implementation of the RA shall identify the timing for initiation and completion of all critical path tasks. The schedule shall specifically identify duration for completion of the project and major milestones.

5.2.2 Intermediate Specifications

Plans and specifications shall conform to acceptable standards and shall be formatted in accordance with CSI requirements. Plans and specifications shall include preliminary specifications for construction, installation, site preparation, and fieldwork standards and performance monitoring.

5.2.3 Intermediate Drawings

Intermediate Drawings shall include an outline or listing of drawings, facility representations containing a process flow diagram, a piping and instrumentation diagram with a control logic table, and continuations and expansions of drawings submitted with the preliminary plans and specifications. The Intermediate Drawings shall also include engineering drawings for grading/paving, foundation, extraction wells and wellheads, piping, electrical, structural, mechanical, instrumentation, and monitoring systems, as appropriate.

5.2.4 Revised Basis of Design

The revised Basis of Design shall include a revised summary of the evaluations conducted to select the design approach. This summary shall include any additions made to the Basis of Design, as presented in the Preliminary Design.

5.2.5 RA Contracting Strategy

The contracting strategy shall describe the management approach for procuring the RA contractor, including procurement methods, phasing alternatives, and contractor and equipment availability concerns.

5.2.6 Updated Identification of Easement and Access Requirements

The need for land acquisitions for access and easement requirements shall be updated, as appropriate, as part of the Intermediate Design.

5.2.7 Identification of the Projected O&M Requirements and Annual Costs

Honeywell shall identify the projected O&M requirements, including performance monitoring, and develop an estimate of the annual O&M costs.

5.2.8 VE Study and Report Recommendations

If recommended by the preliminary VE screening, the VE Study shall be conducted and the report prepared and submitted by an independent Value Engineering group. However, any decisions made as a result of any VE effort

that could affect the design of the remedy shall be submitted to EPA for approval. This task is optional, and shall be done at the discretion of Honeywell.

5.2.9 Approval of the Intermediate Design

The draft Intermediate Design will be submitted to the EPA and the Second Interim Remedy Design Contractor for review in accordance with Section IX of the NHE-2 AOC. Upon receipt of comments from EPA on the Intermediate Design, Honeywell shall implement the Pre-final and Final Designs, if necessary.

5.3 Pre-final and Final Design

These design activities shall be performed if the construction approach uses a conventional design/bid/build strategy in which the design is taken to the 100 percent completion level to allow contractor bidding of the construction work. If a design/build approach is utilized in which the design is developed to about the 60 percent completion level followed by subsequent field engineering during construction, the pre-final and final design activities would not be required. In this case, the as-built drawings will serve as the final design drawings. In addition, the 60 percent design package shall be revised to fully address all EPA comments on the Preliminary and Intermediate Design submittals and re-submitted for EPA approval.

The following discussion and requirements would be applicable if the design/bid/build approach is approved, and pre-final and final design activities are performed. If a design-build contracting strategy is selected, the requirements for the design deliverables will be described in the ARD Work Plan and/or Preliminary Design documents.

5.3.1 Pre-final Design

The Pre-final Design shall fully address all comments made on the Preliminary and Intermediate design submissions, and be accompanied by a memorandum indicating how the comments were incorporated into the Pre-final Design, or a justification as to why they were not incorporated or addressed. The Pre-final Design submittal shall include an updated capital and O&M cost estimate, reproducible drawings and specifications, and a complete set of construction drawings in one-half-size reduction (11-inch by 17-inch size).

The components and deliverables that constitute the Pre-final and Final Design are described below and shall be submitted to EPA for review and approval in accordance with AOC and Attachment 1 to this ASOW. The Pre-final Design shall clearly show any modifications to the design resulting from the Intermediate Design review, if any such Intermediate Design deliverables were required by EPA subsequent to such review.

5.3.2 Final Design

Within 30 days after EPA approves the Pre-final Design, Honeywell shall submit all Final Design deliverables to EPA. All Final Design documents shall be approved and stamped by a Professional Engineer registered in California. EPA approval of the Final Design, including the Final Draft O&M Plan and the Final Construction Quality Assurance Plan, is required before initiating the RA, unless specifically authorized otherwise by EPA.

Honeywell shall include the following components in the Pre-final and Final Designs:

5.3.3 Specifications

A complete set of construction specifications shall be submitted at the pre-final stage. All specifications shall conform to CSI format. If the Value Engineering study is conducted, the VE report recommendations that have been approved by EPA shall be incorporated into the Pre-final Design specifications. The specifications must be consistent with the technical requirements of all ARARs and must meet all ARARs, Performance Standards, and other provisions and requirements of the AOC and the ASOW. Any offsite response activities shall be in compliance with Section 121(d)(3) of CERCLA, 42 U.S.C. Section 9621(d)(3), 40 C.F.R. 300.440, and other applicable guidance. Before submitting the project specifications, Honeywell shall coordinate and cross-check the specifications and drawings.

5.3.4 Drawings

A complete set of construction drawings shall be submitted in the 11-inch x 17 -inch size. Value Engineering report recommendations (submitted as part of the Intermediate Design) that have been approved by EPA shall be incorporated into the Pre-final Design drawings.

5.3.5 Basis of Design

A Basis of Design that incorporates any changes made since the Intermediate Design shall be submitted.

5.3.6 Delivery Plan and Schedule

The Delivery Plan shall incorporate any changes made since the Preliminary Delivery Plan and Schedule. The Final Design should also include a schedule for construction completion and the other construction and operational milestones identified in this ASOW.

5.3.7 Report of VE Modifications

A Report of VE Modifications shall be submitted that describes the changes made to the final designs as a result of the VE Study and Recommendations, if conducted.

5.3.8 Construction Quality Assurance Project Plan ("CQAPP")

The CQAPP shall detail the approach to quality assurance during construction activities at well NHE-2, shall specify a quality assurance official, independent of the Supervising Contractor or Project Coordinator, to conduct a quality assurance program during the construction phase of the project.

5.3.9 Field Sampling Plan

A Field Sampling Plan will be prepared that describes the sampling and analytical measurements directed at measuring progress towards meeting Performance Standards.

5.3.10 Contingency Plan

The Contingency Plan will include (1) analysis of system vulnerability, (2) description of contingencies on system operation to prevent release or threatened releases or exceed Performance Standards (e.g., pump and

control redundancies, containment/overflow controls, relief valves, auto shutoff systems etc.), and (3) notification and reporting requirements should O&M systems fail or be in danger of imminent failure.

5.4 Operation and Maintenance Plan

Honeywell shall submit a draft O&M Plan for EPA's review, in accordance with Sections VIII and IX of the AOC, and in accordance with Attachment 1 of this ASOW. The Final O&M Plan will be submitted upon completion of remedial action construction under a separate scope of work.

O&M Plans shall describe, among other things, the compliance monitoring that will be conducted to measure the performance of the system in achieving and maintaining the Performance Standards described in the ROD. At a minimum, all the manuals shall include the following:

5.4.1 Description of Equipment

A description of equipment including: the equipment identification numbers; identification and description of installed monitoring components; maintenance needs and schedules of site equipment; material requirements; anticipated equipment replacement for significant components; availability of spare parts; and, replacement schedule for equipment and installed components.

5.4.2 Description of O&M

A description of routine and emergency O&M tasks, including startup and shutdown procedures, prescribed treatment or operation conditions, and schedule for each O&M task. In addition, a description of provisions for remote monitoring and control, operator training and certification requirements, staffing needs, and related requirements.

5.4.3 Description of Potential Operating Problems

A description and analysis of potential operating problems, including common and/or anticipated remedies with a description of the system monitoring implemented to track these operational problems. In addition, a useful-life analysis of significant components and replacement costs.

5.4.4 Compliance Monitoring Sampling and Analysis Plan

A description of the compliance monitoring strategy and tasks, location of the points of compliance monitoring, required data collection, and a description of required laboratory tests and their validation and interpretation. (See Section 2.2.5, Sampling and Analysis Plan, for more information). It shall also include criteria for determining when the Performance Standards have been met, and Remedial Action is complete, as well as other indicators of system performance and/or maintenance (e.g., parameters to be monitored to determine timing for activated carbon replacement, etc.).

5.4.5 Waste Disposal

A description of the plans for the proper disposal of materials used and wastes generated during the O&M periods (e.g., extracted groundwater, protective clothing, spent treatment media, and disposable equipment).

These provisions shall be consistent with the off-site disposal requirements of Superfund Amendments and Reauthorization Act, the Resource Conservation and Recovery Act, and applicable state laws. Honeywell, their authorized representative, or another party acceptable to the EPA shall be identified as the generator of wastes for the purpose of regulatory or policy compliance.

5.4.6 Health and Safety Plan for O&M

A description of precautions and necessary equipment for site personnel, safety tasks required in event of systems failure, and safety tasks necessary to address protection of nearby residents and LADWP's drinking water.

5.4.7 Records and Reporting Mechanisms

A description of records and reporting mechanisms including, as appropriate, performance monitoring results, daily operating logs, laboratory records, records for operating costs, mechanism for reporting emergencies, and personnel and maintenance records.

5.4.8 Systems Failure Response

Description of alternative operations and maintenance of the system's processes and procedures in case of failure, including: (1) alternative procedures for the system to prevent release or threatened releases of Waste Material which may endanger public health and the environment or exceed Performance Standards; (2) analysis of system vulnerability and additional resource requirements should a failure occur; and, (3) notification and reporting requirements should O&M systems fail or be in danger of imminent failure.

Attachment 1: Summary of Deliverables

Deliverable	No. of copies ¹	Due ²	EPA Estimated Review period ³
QMP for Supervising Contractor		15 days after the Effective Date	14 days
Project Planning			
Draft ARD Work Plan		30 days after EPA's approval of the QMP	30 days
Final ARD Work Plan		30 days after receipt of any EPA comments on the draft ARD Work Plan	10 days
Design Investigation Work Plan		30 days after EPA approval of ARD Work Plan	30 days
Health And Safety Plan		As approved in ARD Work Plan	21 days
Sampling & Analysis Plan		As approved in ARD Work Plan	21 days
Remedial Design Quality Assurance Project Plan		As approved in ARD Work Plan	21 days
Communications			
Project Status Updates	email	As requested by EPA,, starting after submittal of the ARD Work Plan	N/A
Monthly Progress Reports	email	10 th day of each month, starting after submittal of the ARD Work Plan	7 days
Progress Meeting Notes	email	Within 5 days of each meeting	N/A
Annual Performance Evaluation Report		Annually, by September 30th	21 days
Design			
Design Investigation Report		60 days after receipt of analytical data	30 days
Preliminary Design		120 days after receipt of Design Investigation data, or Final ARD Work Plan, if there is no Design Investigation Report and there is regulatory stakeholder agreement on the design flow rate for well NHE-2, which will be determined during the RD for the Second Interim Remedy	30 days

Deliverable	No. of copies ¹	Due ²	EPA Estimated Review period ³
Intermediate Design		90 days after EPA approval of the Preliminary Design	30 days
Pre-Final Design		90 days after EPA approval of the Intermediate Design	
Draft O&M Plan		With the Pre-final Design	30 days
Final Design		30 days after EPA approval of the Pre-Final Design	
Final Draft O&M Plan		30 days after EPA comments on the draft Plan	30 days

¹ Unless otherwise indicated, five electronic copies shall be provided: one copy to EPA, one copy to EPA's contractor, one copy to LADWP, one copy to CDPH, and one copy to RWQCB.

² All deliverables set forth in Attachment 1 will be reviewed and approved by EPA in accordance with Section IX of the AOC. If EPA disapproves a deliverable and requests modifications, Honeywell shall revise the deliverable and resubmit it to EPA within the timeframe specified in the AOC.

³ The "EPA Estimated Review Period" specified herein is set by EPA as a goal. EPA will strive to achieve this goal to keep the project on schedule. However, if EPA is unable to meet one or more of these review periods, and deliverables from Honeywell are affected by EPA's delay, the deadlines for those deliverables will reflect such delay.

Attachment 2: Primary Guidance and Resources

The following list, although not comprehensive, consists of many of the regulations and guidance documents that apply to the RD/RA process:

- 1) *Greener Cleanups Policy - EPA REGION 9*, issued September 14, 2009; found at: <http://www.epa.gov/region09/climatechange/green-sites.html>.
- 2) *Superfund Green Remediation Strategy*, draft dated August 2009, <http://www.epa.gov/superfund/greenremediation/sf-gr-strategy.pdf>.
- 3) *CERCLA Compliance with Other Laws Plan*, Two Volumes, U.S. EPA, Office of Emergency and Remedial Response, August 1988 (DRAFT), OSWER Directive No. 9234.1-01 and -02.
- 4) *Superfund Community Involvement Handbook*, U.S. EPA, Office of Solid Waste and Emergency Response, April 2005, EPA-540-K-05-003.
- 5) *EPA Guidance on Systematic Planning Using the Data Quality Objectives Process* (EPA QA/G-4, 2006).
- 6) *Federal Acquisition Regulation*, Washington, DC: U.S. Government Printing Office (revised periodically).
- 7) *Guidance on Expediting Remedial Design and Remedial Actions*, EPA/540/G-90/006, August 1990.
- 8) *Guide to Management of Investigation-Derived Wastes*, U.S. EPA, Office of Solid Waste and Emergency Response, Publication 9345.3-03FS, January 1992.
- 9) *Interim Guidance on Compliance with Applicable of Relevant and Appropriate Requirements*, U.S. EPA, Office of Emergency and Remedial Response, July 9, 1987, OSWER Directive No. 9234.0-05.
- 10) *National Oil and Hazardous Substances Pollution Contingency Plan; Final Rule*, Federal Register 40 CFR Part 300, March 8, 1990.
- 11) *Permits and Permit Equivalency Processes for CERCLA On-Site Response Actions*, February 19, 1992, OSWER Directive 9355.7-03.
- 12) *Remedial Design/Remedial Action (RD/RA) Handbook*, U.S. EPA, Office of Solid Waste and Emergency Response (OSWER), 9355.0-04B, EPA 540/R-95/059, June 1995.
- 13) *EPA Requirements for Quality Assurance Project Plans for Environmental Data Operations*, U.S. EPA, EPA/240/B-01/003, March 2001, Reissued May 2006.
- 14) *Scoping the Remedial Design* (Fact Sheet), February 1995, OSWER Publ. 9355-5-21 FS.
- 15) *Standards for General Industry*, Code of Federal Regulations, Title 29, Part 1910, Occupational Health and Safety Administration.
- 16) *Superfund Guidance on EPA Oversight of Remedial Designs and Remedial Actions Performed by Potentially Responsible Parties*, April 1990, EPA/540/G-90/001.
- 17) *USEPA Contract Laboratory Program National Functional Guidelines for Low Concentration Organic Data Review*, EPA-540-R-00-006, June 2001.
- 18) *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*, EPA-540-R-08-01, June 2008.

- 19) *Policy Guidance for Direct Domestic Use of Extremely Impaired Sources*, AOCPP Policy Memorandum 97-005
- 20) *Focused Feasibility Study, North Hollywood Operable Unit, San Fernando Valley Area 1 Superfund Site*, EPA, prepared by CH2MHILL, July 2009
- 21) *American National Standards Practices for Respiratory Protection*. American National Standards Institute Z88.2-1980, March 11, 1981.
- 22) *A Compendium of Superfund Field Operations Methods*, Two Volumes, USEPA, Office of Emergency and Remedial Response, EPA/540/P-87/001a, August 1987, OSWER Directive No. 9355.0-14.
- 23) *Data Quality Objectives for Remedial Response Activities*, USEPA, Office of Emergency and Remedial Response and Office of Waste Programs Enforcement, EPA/540/G-87/003, March 1987, OSWER Directive No. 9335.0-7B.
- 24) *Engineering Support Branch Standard Operating Procedures and Quality Assurance Plan*, USEPA Region IV, Environmental Services Division, April 1, 1986 (revised periodically).
- 25) *NIOSH Plan of Analytical Methods*, 2nd edition. Volumes I-VII for the 3rd edition, Volumes I and II, National Institute of Occupational Safety and Health.
- 26) *Occupational Safety and Health Guidance Plan for Hazardous Waste Site Activities*, National Institute of Occupational Safety and Health/Occupational Health and Safety Administration/United States Coast Guard/Environmental Protection Agency, October 1985.
- 27) *Superfund Remedial Design and Remedial Action Guidance*, USEPA, Office of Emergency and Remedial Response, June 1986, OSWER Directive No. 9355.0-4A.
- 28) *EPA Region IX Sampling and Analysis Plan Guidance and Template* (R9QA/002.1, April, 2000).
- 29) *Draft: Region 9 Superfund Data Evaluation/Validation Guidance*, USEPA, Quality Assurance Office, R9QA/006.1, December 2001.
- 30) *Methods for Monitoring Pump and Treat Performance*, USEPA, Office of Research and Development, June 1994 (EPA 600/R-94/123).
- 31) *A Systematic Approach for Evaluation of Capture Zones at Pump and Treat Systems*, EPA, January 2008 (EPA/600/R-08/003).
- 32) *Operation and Maintenance in the Superfund Program*, EPA, May 2001, (OSWER 9200.1-37FS, EPA 540-F-01-004).
- 33) *Specifications and Guidelines for Quality Systems for Environmental Data Collection and Environmental Technology Programs* (American National Standard, January 5, 1995), ANSI/ASQC E4-1994.
- 34) *EPA Requirements for Quality Management Plans (QA/R-2)*, EPA/240/B-01/002, March 2001, reissued May 2006.
- 35) *EPA Guidance for Data Quality Assessment, Practical Methods for Data Analysis* (EPA QA/G-9, 1998).

Attachment 3: Performance Standards for COCs

Table 6. Performance Standards for COCs in Extracted and Treated Groundwater (from ROD)

Contaminant of Concern	Federal MCL (µg/L)	California MCL (µg/L)	AOCPh Notification Level (µg/L)	Basis for Performance Standard	Performance Standard (µg/L) ^a
TCE	5	5	None	Federal MCL	5
PCE	5	5	None	Federal MCL	5
1,1-DCA	5	5	None	Federal MCL	5
1,2-DCA	0.5	0.5	None	Federal MCL	0.5
1,1-DCE	6	6	None	Federal MCL	6
cis-1,2-DCE	6	6	None	Federal MCL	6
1,1,2-TCA	5	5	None	Federal MCL	5
Carbon tetrachloride	0.5	0.5	None	Federal MCL	0.5
Methylene Chloride	5	5	None	Federal MCL	5
Total Chromium	100	50	None	California MCL	50
Hexavalent Chromium	None ^b	None ^{b,c}	None	See footnote "d"	5 ^d
Perchlorate	None	6	None	California MCL	6
TCP	None	None	0.005	CDPH notification level	0.005
1,4-dioxane	None	None	3	CDPH notification level	3
NDMA	None	None	0.01	CDPH notification level	0.01

Notes:

^aThe AOCPh permitting process may require lower concentrations in the treated effluent.

^bFederal and state MCLs specific to CRVI have not been established; therefore, the state MCL for total chromium currently is applied to CRVI.

^cA PHG for CRVI is currently under development by OEHHA. Following PHG development, a state MCL specific to CRVI may be established.

^dBased on discussions with LADWP, it is EPA's understanding that LADWP will continue to use a voluntary cleanup level of 5 µg/L for CrVI for water it will accept for use in its water supply system. Consequently, under the drinking water end use option, CRVI treatment at the NHO will be needed so that LADWP's voluntary cleanup level of 5 µg/L can be met.

Appendix D

Los Angeles Regional Water Quality Control Board

January 3, 2013

Mr. Benny DeHghi, Manager
Remediation & Evaluation Services
Honeywell International Inc.
2525 West 190th Street
Torrance, CA 90505-6099

Re: Cleanup and Abatement Order R4-2003-0037; Well NHE-2

This correspondence is to memorialize the Regional Board's agreement that the long-term treatment and disposal approach for well NHE-2 will be developed pursuant to an Administrative Settlement Agreement and Order on Consent ("Settlement Agreement") to be entered into between the United States Environmental Protection Agency and Honeywell International Inc. ("Honeywell"), and the Settlement Agreement will supersede the Cleanup and Abatement Order R4-2003-0037 and its amendments ("CAO") only as to the requirements that apply to long term treatment and disposal of water at well NHE-2.

Background

Well NHE-2 is a component of the existing groundwater extraction and treatment remedy at the North Hollywood Operable Unit ("NHO") of the San Fernando Valley (Area 1) Superfund Site ("Site").

In 2003, the Regional Board issued the CAO to Honeywell, which required Honeywell to assess emerging chemicals and heavy metals (including total and hexavalent chromium) in unsaturated soil and groundwater beneath the former Bendix facility within the NHO. In July 2006, the total chromium concentration detected in water extracted by well NHE-2, located near the former Bendix facility and other potential chromium sources, began to increase. In early 2007, the elevated concentrations of chromium in well NHE-2 caused total chromium concentrations in the combined NHO treatment system effluent to exceed 30 micrograms per liter (60 percent of the state MCL). As a result, the California Department of Public Health advised Los Angeles Department of Water and Power ("LADWP") to shut down well NHE-2 or divert the water produced by the well to a non-potable use. Shortly thereafter, LADWP shut down well NHE-2, which kept elevated levels of chromium out of LADWP's drinking water supply, but reduced the groundwater extraction and treatment system's ability to contain the NHO groundwater plume.

In response to the elevated concentrations of hexavalent chromium detected in well NHE-2, the Regional Board amended the CAO March 19, 2007. The amended CAO required a water replacement plan. In response to the CAO, Honeywell submitted and the Regional Board approved in 2008 a short-term treatment plan for well NHE-2. The short-term treatment plan was implemented in September 2008 and continues to operate today. The short-term

treatment plan involves conveying the extracted and treated groundwater to the sanitary sewer in accordance with a discharge permit from Los Angeles Bureau of Sanitation ("LABOS"). The Regional Board also required Honeywell to proceed with the development and submittal of a long-term treatment plan for well NHE-2. Honeywell began developing the long term treatment plan for well NHE-2 in October 2008 in coordination with the Regional Board. The long-term treatment plan being contemplated involved NHE-2 wellhead treatment of hexavalent chromium with ion exchange, and if necessary, 1,4-dioxane treatment by advanced oxidation process (AOP) conveying the water to the NHOU Central Treatment Facility, and then discharge of the treated water into the LADWP's water supply collection header. The Work Plan further stated that the combined effects of the on-site former Bendix facility in situ treatment and the short-term NHE-2 treatment (sewage discharge) may eliminate the need for long-term wellhead treatment at NHE-2.

Honeywell began pursuing the long-term remedy in October 2008. Because the treated water would be discharged into the LADWP's water supply collection header, the remedy evaluation followed the process defined in the San Fernando Basin Water Management Plan's Policy Guidance for Direct Domestic Use of Extremely Impaired Sources, California Department of Public Health (CDPH) Policy Memorandum 97-005 ("97-005"), which details specific process for the evaluation of impaired water sources before they can be approved for use as drinking water.

In early 2009, Honeywell began the 97-005 process by modeling the capture zone for the NHE-2 well and evaluating potential sources within that capture zone that might impact the quality of groundwater extracted from NHE-2. In April 2009, Honeywell prepared the NHE-2 Source Water Assessment and Raw Water Characterization Work Plan as a first step in the preparation of the 97-005 permit amendment application required for the long-term remedy presented in the January 2008 NHE-2 Wellhead Treatment Plan. Following agency and stakeholder review of the source water work plan, groundwater samples were collected in July and October 2009.

In November 2009, following completion of the capture zone modeling and source water assessment, Honeywell began its final evaluation of suitable treatment and discharge options for impacted water pumped from NHE-2. Consistent with the 2008 NHE-2 Wellhead Treatment Plan, the evaluation gave consideration to the fact that a groundwater treatment system designed to reduce chromium concentrations in groundwater at the former Bendix facility began operating in 2009.

While Honeywell continued developing the long term treatment plan for well NHE-2 in coordination with the Regional Board, EPA issued its September 30, 2009, Record of Decision ("ROD") selecting a new interim remedy for the NHOU, including a treatment remedy for well NHE-2. Although USEPA selected a treatment remedy for well NHE-2 in the ROD, Honeywell remained obligated, pursuant to the CAO, to develop a long-term treatment plan for well NHE-2. Accordingly, Honeywell submitted a draft NHE-2 Long-Term Treatment and Disposal Plan to the Regional Board on March 2, 2010. The draft Long-Term NHE-2 Treatment and Disposal Plan proposes conveying the water extracted at well NHE-2 to the former Bendix Facility for treatment followed by on-site reinjection. This plan was intended to operate until chromium concentrations in the groundwater extracted by well NHE-2, when combined with effluent from the other NHOU extraction wells, meets the ROD's performance standards for chromium.

Effective February 21, 2011, EPA, Honeywell, and Lockheed Martin Corporation ("Lockheed") entered into an Administrative Settlement Agreement and Order on Consent, U.S. EPA Region IX CERCLA Docket No. 2011-01, ("RD AOC") for design of the entire remedy consistent with the ROD, including treatment and disposal of water at well NHE-2. Pursuant to the RD AOC, EPA, Honeywell, and Lockheed also agreed that Honeywell would separately develop and submit a design for an alternate well NHE-2 treatment and disposal approach to EPA for its

consideration (the "Alternate NHE-2 Treatment and Disposal Approach"). If EPA approves the Alternate NHE-2 Treatment and Disposal Approach, it will be integrated into the final design for the remedy. The Alternate NHE-2 Treatment and Disposal Approach will be developed pursuant to a separate administrative settlement agreement and order on consent ("Settlement Agreement") between the United States Environmental Protection Agency and Honeywell International, Inc. ("Honeywell").

Regional Board Agreement

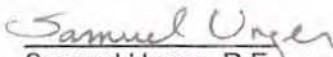
The CAO issued by the Regional Board and Settlement Agreement entered into with EPA could potentially subject Honeywell to conflicting regulatory schemes.

The Regional Board has reviewed the Settlement Agreement and agrees that upon the Effective Date of the Settlement Agreement, the Settlement Agreement and the Alternate NHE-2 Treatment and Disposal Approach developed pursuant to the Settlement Agreement will supersede the CAO requirements that apply to long-term treatment and disposal of water at well NHE-2. The Settlement Agreement shall not affect Honeywell's obligations to comply with provisions of the CAO that address matters other than the long-term approach to treatment and disposal of water extracted from well NHE-2, including water replacement and groundwater extraction and containment. In addition, Honeywell shall continue to implement the short-term treatment plan until notified by EPA and the Regional Board.

The Regional Board reserves any right to take further enforcement, including modifying the CAO, should such enforcement be necessary in the future.

If you have any questions regarding this letter, please contact Dr. Arthur G. Heath at (213) 576-6725, via email at aheath@waterboards.ca.gov, or Mr. Larry Moore at (213) 576-6730 or via email at lmoore@waterboards.ca.gov.

Sincerely,


Samuel Unger, P.E.
Executive Officer

cc: Mr. Richard Slade, Upper Los Angeles River Area (ULARA) Watermaster
Mr. Vahe Dabbaghian, Los Angeles Department of Water and Power
Ms. Kelly Manheimer, US Environmental Protection Agency, Superfund Division, Region IX
Ms. Lisa Hanusiak, US Environmental Protection Agency, Superfund Division, Region IX

